AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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October.

"But farmer, look, where full-eared sheaves of rye
Grow heavy on the tilth, that soil select
For apples; thence thy industry shall gain
Ten-fold reward; thy garners, thence with store
Surcharged, shall burst; thy press with purest juice
Shall flow, which, in revolving years, may try
Thy feeble feet, and bind thy flattering tongue.
Whoe'er expects his laboring trees should bend
With fruitage, and a kindly harvest yield,
Be this his first concern: to find a tract
Impervious to the winds, begirt with hills,
That intercept the Hyperborean blasts
Tempestuous, and cold Eurus' nipping force,
Noxious to feeble buds."—PHILIP'S "CIDER."

Brown October is here with its bursting barns and full granaries, its falling leaves and fruit. The season admonishes us to plant fruit trees, as well as to gather in the fruit harvest. Why is it, that so many farmers' families are content to go without fruit, in a land whose soil and climate are so congenial to fruit that the humblest efforts at horticulture are rewarded with success? Intelligent pomologists, who have seen the fruit shows of Europe, tell us that they do not excel our own, notwithstanding their larger experience and skill. The apple grows almost every where in our broad land, and most of the large fruits have quite as wide a range of soil and climate, though they are much less abundant. Apples have been most common, probably because they were the most common fruit of the father land, and were planted by the first settlers of the country. They were found to flourish much better here than there, and the seedlings which were soon originated upon American soil, were improvements upon any thing ever seen in England. In a virgin soil, the tree would grow anywhere with luxuriance, and only needed to have a clear field to yield abundant fruit. The pear was rather an aristocratic tree, and needed much more careful culture in England than the apple-tree. Here the standards flourish quite as well as the apple tree, and seem to have fewer enemies, and to be quite as productive. Yet the market has never been adequately supplied, and the finer varieties of pears bring two and three times as much as the best varieties of apples. A pear orchard of any considerable extent is still a novelty even in the oldest parts of the country. Apple orchards, though common, are still far below the wants of the country. Hundreds of farms where the apple is as hardy as the forest oak, are still without a good orchard.—It is somewhat amusing to hear the reasons assigned by thriving farmers, for the great mistake in their husbandry, of not planting an orchard?

It is never admitted that they do not love fruit. There is hardly a man or woman in a thousand that is not fond of every variety of fruit. Every boy sighs for his neighbor's apples and pear trees, and not only breaks the tenth, but the eighth commandment, in the eagerness of his desire. Watermelon patches are proverbial plunder on moonlight nights. With many the reason of this failure is their unsettled condition. They do not own the soil they cultivate, or they are expecting soon to sell out and emigrate. The planting of an orchard is regarded as a work for another generation.

Others do not believe that the raising of fruit pays as well as other departments of husbandry. In the first place, one has to wait several years before he can expect any returns whatever, for his labor. In raising corn and potatoes there is something to sell every Fall. Fruit has many enemies not only in the shape of insects but of bipeds, who seriously interfere with the profits of the orchard. Some are remote from a good market, and though the depot is within an hour's ride of the farm, they have never thought of railroad conveyance to a market. Others admit the advantage of planting an orchard, and have always been intending to do it, but they have had so much work upon their hands that they have never quite got ready. Money is scarce, and the nurseryman wants cash. These objections, however unsubstantial, are real to many farmers, and possibly to some of our readers.

We have been eating fruit for three years, from apple trees planted only eight years ago, and from pear trees planted much more recently. They bear with increasing abundance every year, and it seems to us so feasible and so profitable, to stock an acre or two with fruit trees, that we can not let the season of tree planting pass without a word of exhortation.

A home surrounded with well grown fruit trees and vines adapted to the soil and climate, is one of the most beautiful objects we meet with at this season of the year. Every one admires the dwelling however humble, that looks out upon the street, through shaded walks, through fruitful gardens and orchards. What can be finer than a well grown pear tree, hung with its yellow fruit, an apple whose boughs are bending to the ground with their ruddy burden, or a vine loaded with its purple clusters. These are cheap and substantial ornaments, that any man may plant around his home. The green upon his window, and the paint on the dwelling will require frequent expensive renewal; every returning Spring will bring out the living ornaments in new dress without money and without price.

There is no greater misconception than the popular notion that fruit growing does not pay as well as other branches of husbandry. It requires some capital, some skill and patience, to wait for returns. But capital and skill invested here are certain to have their reward. It is no uncommon return for an acre in apple trees to yield a hundred dollars, while under favorable circumstances and high cultivation, the yield is two or three times greater. Farmers who have gone most largely into fruit culture, are generally the best satisfied with it. It furnishes something to sell from August until March. The early apples have to be marketed in their season, but the Winter varieties can wait for good prices from three to six months without damage to their quality. Pears though more perishable than apples, and requiring more skill in their handling and ripening, are enough higher in price to make them profitable.

Not the least advantage of an abundant supply of fruits in the family, is their influence upon health. At this season of the year they are a great safeguard against fevers and diseases of the bowels, and were they freely eaten in all our families, the sick list would be greatly diminished. The craving of children for fruit, almost universal, is not so much an evidence of total depravity, as the working of instinct, seeking what it does not find in bread and meat.

Then, as we have referred to the children, and mean to say a good word for them, there is no tie to bind them to the old homestead, outside of the warm currents of domestic love, like the fruit yard and orchard. Who does not recall among the happy memories of his childhood, if he were so highly favored, the old trees whose shade was his play ground and whose fruits were his daily food, the garden walks lined with berries, and the vines upon the arbor and house-side that grew purple in the October sun.

Calendar of Operations for Oct., 1861.

[A glance over a table like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 45°; but will be equally applicable to points further North and South, by allowing for latitude.

Explanations.—*f* indicates the *first; m*, the *middle;* and *l*, the *last* of the month.—Doubling the letters (*ff*, or *mm* or *ll,*) gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either, or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

Much profitable labor may be done on the farm in October. The chief business will be to secure the root crops, and to husk the corn and properly store the fodder. Permanent improvements in necessary buildings, fencing and draining, add to the available capital, and should not be neglected from false economy; the present month is a favorable time for this work.

Apples—Finish gathering before exposed to injury from frost, and market or store for future use. Cooked apples are valuable food for stock, when too poor to dry.

Buildings—Examine thoroughly and make all needed repairs. Clear out eaves troughs, and arrange drains to carry away surplus water, especially from the manure heaps. Now is a favorable time for painting buildings.

Butter properly made early in October is of the best quality. Store sufficient for Winter use, working it well.

Cabbages—Gather and store, *ll*, except the latest.

Cattle—Commence feeding before the pastures fail. Use the tops of roots and refuse from the garden, etc. Read article on page 300.

Cellars—Follow directions of last month. Secure good ventilation, particularly where roots, etc., are stored.

Corn—Husk, *f, m*. Select the best ears for seed, trace them together, and hang up to dry. Store all stalks, leaves, and husks for fodder. The thick buts may be used in the pig pen; swine will soon work them into manure. Store corn in well ventilated cribs.

Draining may be attended to while the weather permits. Read articles in this and previous numbers.

Grain—Thresh out, *ff*, if not done, and store in tight bins secure from vermin. Market when prices are remunerative. Save all straw for feeding and litter.

Hogs—Commence fattening early. Cooked food pays best. Keep pens well ventilated, clean, and supplied with plenty of litter.

Ice Houses—Build, if not already supplied. A cellar is not needed; ice may easily be kept above ground if the house is properly built, with good ventilation and draining.

Manure—Provide an abundant supply of muck to absorb liquid manures, and for making compost. Use weeds and other refuse from the garden and elsewhere, including all falling leaves, to increase the compost heap.

Plowing late in the Fall is very beneficial to stiff clay soils intended for tillage next year. Leave the ground without harrowing, to expose as much as possible of the surface to the action of frost.

Potatoes—Harvest before injured by frost, and market, or store in the cellar. If room be scarce, they can be buried in heaps in the field with safety.

Poultry—Cleanse the poultry house thoroughly and whitewash it. Remove and carefully save all droppings. Provide a good supply of gravel for Winter use. Commence to fatten poultry early. Read article on page 301.

Pumpkins—Feed to milch cows and fattening stock, first removing the seeds. Store any surplus before injured by frost. They may be kept quite late by covering with straw or stalks. Handle with care to prevent bruising.

Roads—Put in good repair before the Fall rains. Keep sluice ways open, and arrange them if possible so as to distribute the wash from the road over the adjoining fields.

Roots—Beets and carrots should be harvested and stored in the cellar or in pits, *m, l*. Remove all tops, and feed to cattle. Handle carefully to prevent bruising. Leave them exposed a day or two before storing to part with superfluous moisture. Turnips may be left until next month, except in very cold northern regions.

Sheep—Keep thriving by an occasional feed of roots and grain with hay, as the pastures fail. Salt regularly, and give free access to water.

Sorghum Sugar Cane—Cut and manufacture as soon as fully ripe, and before injured by frost. If all can not be worked up before cold weather, house or otherwise protect the stalks until used, which should be as soon as practicable after cutting.

Tools—Leave none exposed to the weather. If you have no tool room provide one, or at least put them under cover. Put all in repair in leisure hours. Repaint wood work, clean all iron and steel surfaces and coat them with a mixture of lard and resin to preserve from rust.

Trees—Plant abundance of fruit and ornamental about the dwelling, in the fields, and by the road-side.

Orchard and Nursery.

The labor of harvesting the fruit crop this season, is unfortunately light in many sections. The chief cause of the small crop was the heavy frost in Spring just as the trees came into bloom. There is no preventive for this except planting in a cool backward place, or mulching about the roots to prevent an early growth. But if the trees failed to produce a crop of fruit from exhaustion of the soil, a good coating of manure, or a compost of muck and lime, or ashes, mixed with stable manure, applied at almost any season will produce a thrifty growth and prepare the way for future crops. A large portion of the fruit is borne on shoots and spurs of one or two previous seasons' growth, and if this growth has been feeble the future crop must be light. Manure applied now will be carried into the soil by Fall rains, and be in condition to be taken up by the rootlets in early Spring. It is not enough to spread it for a few feet about the trunks of old trees, for the fibrous roots which take up the manure, extend six to ten and twelve feet from the trunk. The best way is to spread the manure uniformly over the whole ground. If the soil has not been stirred for many years, plow it lightly, turning in a good coating of manure.

In addition to manure, if the orchard is young but unthrifty, a severe cutting back will often benefit it. Some of the roots may be diseased, and the nourishment furnished by the others be insufficient for the top. By cutting out some of the branches and heading back the others, new vigor will be forced into those remaining. If on the other hand the tree is growing too vigorously, producing little fruit, dig about it and with a sharp spade root prune it moderately, and head back next Summer to induce fruit buds.

In gathering apples and pears for keeping, much care is required. Slight bruises mar the appearance of fruit and hasten decay. Pick carefully by hand, or with one of the fruit gatherers shown in this or the previous *Agriculturist*, and lay with care in baskets or barrels, before taking to the cellar, keeping covered from rain, if in the orchard. Only remove to the cellar upon the approach of cool weather, and then keep the cellar cool and well ventilated. It is still better to place them in an out building until there is danger of freezing. Both apples and pears keep best in a temperature but little above freezing, with a moderately dry atmosphere. An ice house will often keep Bartlett and other Fall pears into Winter. It is better to leave late fruit upon the trees till cold weather unless there is danger of their being blown off.

Cider making will be commenced the last of the month. Use only sound apples, leave the mashed apples in the juice for twenty four hours before pressing, fill the clean sweet barrels and put in a cool cellar, allowing the fermentation to go on slowly for a few weeks, when the barrels may be bunged up tight.

Dry a good supply of Autumn fruit for Winter use, planting the seeds for a nursery stock. Before the close of the month, business should be lively in the nursery. Many persons who deferred planting trees in the Spring owing to the "times," are now contemplating setting an orchard. We advise them to do so, as soon as frost has killed the foliage, rather than wait till Spring. See article page 305, on Fall transplanting. We wish to be emphatic in our advice to *plant fruit trees*, and on well drained or naturally dry soil, we would set the hardy apple, pear, and quince trees early this Fall—the stone fruits, and some of the tender pears may be left until Spring.

In addition to taking up and sending away trees for present planting, the nurseryman should now collect seeds of apples, pears, quinces, with nuts, acorns and seeds of the various ornamental trees and shrubs, and plant at once, or mix with earth and leave in boxes in exposed situations. See that the boxes are not water tight or they may retain too much moisture.

Kitchen and Fruit Garden.

The work of the month in this department is principally securing the remaining squashes, cabbages, potatoes, beets, etc., before they are injured by frost. Something may be done to forward next Spring's work. As fast as crops are removed, clear the ground of weeds, and dig it over, to remain exposed during Winter; this will mellow the soil, and destroy many insects. Tops of roots and other refuse may be fed to cattle, and weeds, etc., be carried to the compost heap.

Asparagus—Make new beds now rather than in Spring. Spade up the ground 18 inches deep, work in 6 inches of horse manure, and plant two-year-old roots a foot apart each way, about 4 inches below the surface.

Beets—Pull before injured by frost, twist off the tops, and if the weather be fair, leave to dry before housing.

Blackberries—Set out a full supply of improved varieties, in soil enriched with compost of leaves, muck, and well rotted manure. Plant 4 feet distant in rows 8 feet apart.

Cabbages and Cauliflowers—Harvest, *ll*, except those planted latest. Set young plants in cold frames, *m, l*.

Carrots—Dig, cut off tops, and store in cellar, *m, l*.

Celery—Earth up, *ff*, on a clear dry day, after the dew is off. Keep the soil from falling between the stalks, which would cause them to rust and spoil.

Cold Frames—Prepare, *m, ll*, to protect cabbage, cauliflower, lettuce, etc., in Winter.

Currants and Gooseberries—Transplant, *m, l*. It is better to set them in open ground than close beside fences where they are cultivated with difficulty. The Versailles, Red Dutch, and White Grape are standard varieties.

Fruit Trees—Plant hardy sorts, *m, l*. It is better to have fruit trees in an enclosure separate from the garden, except perhaps a few dwarfs.

Grapes—Gather as they ripen for use and for market. For keeping in Winter leave them upon the vines as long as may be without danger from frost, gather carefully, cut out defective berries, and pack in shallow, close boxes, between layers of cotton batting. Keep in a dry place, secure from freezing. Transplant vines, *m, l*.

Lettuce—Transplant late sown to cold frames, *ll*, for Winter use. Or seed may now be sown in the frames.

Mushrooms—Make beds, *f, m, l*. Protect from frost. For full directions see last month, page 274.

Onions sown late, for early use next Spring, will need protection from frost; cover with an inch or two of straw.

Parsley—Cut back the growth that new shoots may form. Sow seed in frames for Winter use.

Parsneps—Leave the main crops in the ground until Spring—they need no protection, and are improved by freezing. Dig what are wanted for Winter use, *ll*, and bury in sand in the cellar.

Pickles—Gather and pickle cucumbers, unripe muskmelons and tomatoes, or pack in salt for future pickling.

Raspberries—Hardy varieties may be transplanted, *m, l*, though Spring is a more favorable season. Lay down canes of tender sorts, and cover with a little earth.

Rhubarb—Plant roots of improved varieties *m, l*. Sow seed at same period.

Salsafy or Vegetable Oyster—Treat same as Parsneps.

Seeds—Select the best as they ripen, preserve and label carefully, with the name, and the year of growth. Select the best roots and store apart to raise seed next year.

Spinach—Protect with a covering of litter, *ll*, that sown last month for Spring. Weed and thin former sowings.

Squashes—Gather before injured by frost. Leave the stems on, and avoid bruising. Store in a cool, dry place.

Strawberry Beds—Finish setting out, *ff*, if not already completed. Cover beds, *ll*, with an inch of straw or other litter to afford partial protection.

Tomatoes are easily preserved in bottles, according to directions given in previous numbers. The fruiting may be prolonged by protecting the vines from frost with a covering of thin cloths to be removed in the day time. Use unripened fruit for pickles.

Trenching—The present is the best season for this work. Read article on page 307.

Turnips—Store or market early varieties, *m, ll*, Ruta bagas and other late kinds will grow until next month.

Winter Cherries—Collect as they ripen, and preserve, or leave them in the husks to be used as wanted.

Flower Garden and Lawn.

The chilly nights remind the gardener that it is time to remove tender plants to their winter quarters. It is not best to leave them out until there is actual danger of frost, for plants which are to be kept in a thrifty growing state during winter, should not receive the chill even of an atmosphere as low as 40°. Removing these flowers from the borders will leave a barrenness unless this was provided for by a judicious arrangement of dahlias, chrysanthemums, and other late bloomers. Where there are no suitable houses for keeping plants over winter, a "flower pit" can be cheaply constructed, which will serve a very good purpose. It is simply an excavation in the dry earth, four to five feet deep, in the bottom of which the pots of half hardy plants are set, and the whole covered over with plank and earth. The sides may be of brick, or boards even. It should only be covered with earth when there is absolute danger of freezing, and it should be ventilated occasionally in mild weather, during the winter.

The Dahlia and Chrysanthemum are the chief [illegible]

tions now, and if a good selection of each was planted, the early flowers are scarcely missed. Some of the new seedlings of both kinds are really superb, and many of the old sorts not to be despised. Keep well secured to stakes, or the autumn winds will make sad havoc with them. Some of the bedding plants are still in flower, and will remain so and be nipped by frost unless lifted and taken inside at the proper time.

Bulbous Flowers should now be set for early Spring bloom. They will flourish in a common garden soil, and richly repay the cost and trouble. A fine collection of Hyacinths, Tulips, Crown Imperials, Lilies, Iris, Jonquils, Narcissus, Crocuses, and Snowdrops, is a beautiful sight at any time, and the more so as they bloom early in the season, some of them while the snow bank yet lingers in the shade of the fences. A single bed can be made of all these varieties, or if the grounds are ample, it is well to devote a bed or plot to each sort. Spade deeply and trench if possible, working in plenty of fine *old* manure. Plant the larger bulbs four inches deep, and eight to twelve inches apart, using a little sand, if accessible, around and over the bulbs. The smaller crocuses and snowdrops may be set three inches apart, and one inch deep. Of course, taller plants should be in the center, if the bed is circular. See article on page 306.

October is a good month for grading, trenching, and turfing, or seeding the lawn. If there is not time to trench, or the grounds are so large that the expense is too great, at least subsoil thoroughly, working in a generous supply of well rotted manure. Where turfing is used, let the sods be beaten down, and sift in fine soil or sand, to fill any crevices. If grass seed is sown, mix in a little Winter rye to assist in protecting the roots during Winter. The sowing should be done early in the month. Roll the ground after sowing, and again just before hard freezing weather sets in. (See Basket Item.)

The flower borders, and indeed the whole ornamental grounds are too frequently neglected late in the season, weeds taking the place of former bloom, and dried flower stalks and decaying leaves marring the beauty of the beds and grass plots. Carefully remove all offensive objects, raking the dry leaves from the lawn, cutting away the dead flower stalks. If a spot of ground is entirely bare of plants, spade it up, rake smoothly, and it will not offend the eye all through the winter months.

Many of the perennials, such as Hollyhocks, Pœonies, Phloxes, Lilies, Sweet Williams, Bee-larkspur, Iris, Tradescantia, Foxglove, Campanulas, Rocket, Mallows, Spiræa, Clematis, etc., should be transplanted the last of this month, if moved at all, instead of leaving them until Spring. Save a good stock of late ripening seed, selecting the best of each sort from the previously marked specimens, and properly secure for another season.

A large portion of the hardy flowering shrubs will make a better growth next season, and show a finer bloom if planted this Fall. Among them are Pyrus Japonica, Dwarf Almond, Hardy Azalias, Sweet Scented Shrubs, Scotch Broom, Mezereon, Forsythias, Flowering Thorns, Stuartias, Deutzias, Honeysuckles, Euonymus, Altheas, Hydrangeas, Glycine, Jasmine, Privet, Mahonias, Syringos, Flowering Currants, Purple Fringe, Spiræas, Snowberry, Lilacs, Viburnums, Roses, Chinese Weigelia, etc.

Excepting Evergreens, plant the hardy ornamental and shade trees as soon as the leaves fall. There is more leisure at this season, and many trees do better when planted early in the Fall. See if there are not a few vacant places about the buildings, in the yards, or along the avenues, where a few trees would add beauty to the place, and break up the sameness, or afford a desirable shade from sun, and screen from high winds. Do not plant *tall* trees too thickly near the dwelling. Set them a little in the distance, with shrubs near the buildings. It is desirable to have some sunshine and a circulation of air around the house.

Green and Hot-Houses.

First look over the suggestions offered last month. Every part of the buildings should be neatly cleaned, as it will be more difficult to do this after plants are brought in. It is high time for most tender plants to be in out of the cold. Securing those still out, and potting and preparing for Winter will be the main work of this month. Some fire heat will be needed among the tropical collections, and those to be forced into early bloom. Care must be taken, however, not to excite a too hasty weak growth, remembering that the atmosphere without is cool at this season, and that all changes should be gradual. For many plants, simply protection from frost is all that is now wanted, and for these no fire is needed.

In taking in the various collections, be careful to cleanse the pots from moss, weeds, etc., and see that no dead leaves or decaying branches are left upon the plants to taint the atmosphere with their impurities and offend the eye by their unsightliness. Cut or pinch back freely to make strong bushy heads, by inducing vigorous new shoots. In arranging them upon the shelves it is well to group them according to their habits, those which require much heat in one room, and plants requiring a more temperate atmosphere in another. They should, at the same time, be arranged with reference to their hight, the low growing ones in front, and the taller varieties back, or better still, have shelves arranged to rise above each other.

A large supply of potting soil should be in readiness, as there is much repotting to be done at this season, besides providing for seedlings and layers now in the open ground.

The houses will need syringing occasionally to keep up a humid atmosphere. It will also be beneficial in keeping down insects. As the plants are not growing vigorously, only a moderate supply of water will be required. It is better at this season to apply it in the morning.

Ventilation should be properly attended to. More air is required for plants just brought in, than when they have been long in the house.

A few quick growing annuals should be sown at once, for a mid-winter bloom. They will come in well, and furnish a variety with the early and late flowering perennials. Some of the flowering shrubs should also be potted and forced into a winter bloom, especially if cut flowers or bouquets are to be wanted.

Special care should be taken to guard against insects: if these are once freely introduced, it is often very difficult to expel them. Probably the very best method of treating plants badly infested with green fly, red spider, or any other insects, is to dip them inverted into water heated from 120° to 130°, keeping them there for a few seconds. The Gardener's Monthly recommends holding them five seconds in water raised to 130°. This will smother the insects, without injuring the plants.

Apiary in October.

Prepared by M. Quinby—by request.

It is now time to decide on what colonies to Winter... Most of the loss during Winter and Spring, is the result of undertaking to keep improper colonies, or of bad management. The chances of success with a colony that is now in just the right condition, with honey enough, and the right number of bees, are three times better, than with one that needs to be supplied with some food. We can not supply a deficiency, and then have the same natural condition as when the bees provide for themselves. Where increase of stocks is not particularly desired, the good ones only should be saved. But many, and especially beginners without experience, will want to keep all they have, and it is important that they attend to any deficiencies that can be supplied this month. Success will very much depend on doing things at the right time. Examine them the first cool morning. A strong colony extends through all the combs. One of only moderate strength, will often make a show of a large swarm, if the combs are badly diseased, or very full of honey. If a stock lacks bees only to make it good, they may be added from some condemned colony, paralyzing both with puff ball smoke when uniting them—See directions for the process in *Agriculturist* for October, 1860.

When there are bees enough, but honey is lacking, it may be provided, if there are combs enough in the hive to hold it; if not, the bees should be taken out, and the hive and contents set away for another year, or the honey given to some other light stock. Honey in the combs when fed should have the sealing of the combs cut off, and placed either under the bees—the bottom of the hive fitting down close, to keep out the robbers—or placed on the top, covering with a close box. When no honey can be had but such as is taken from diseased stocks, it must be strained and scalded, or disease will be communicated. Add a little water to prevent burning, and take off the scum as it rises. Put it in a shallow dish, with some floating material to keep the bees from drowning. Feed them as fast as possible to the required weight—20 or 25 lbs—otherwise they consume a great deal in rearing brood which the feeding will always induce. West India honey when used, should be managed in the same way. Honey prepared for Winter stores, should be as near the consistency of that stored by the bees as possible. If too much water is left in it, it is apt to induce dysentery, but it is quite sure to burn in scalding, if some water is not left in it. When no other feed but sugar is used, I think it is better to give it in the Winter than now. Candy alone has proved a failure with me.

Condemned colonies should now be disposed of. When the bees are to be killed with the fumes of the sulphur pit, it is much the best way to drive out the bees first. It takes less time, than to get them out when removing the honey after being smothered between the combs. The honey also, will be free from any of the effects of burning sulphur. Break up such combs as are to be strained, immediately on the removal of the bees; the honey will run out much more freely than when cold. If the combs are not too old, a few pieces nearly free from bee bread, may be found near the top and sides of the hive, which will do for the table without straining. The inferior honey is near the middle and bottom, and should be strained. Among the different methods of doing it, one is simply to mash it and pour through a sieve or colander to skim off the particles of comb. A box answers a good purpose for large quantities. It should be about four feet long, sixteen inches wide, by five deep, and wire cloth bottom. This should be on a frame four feet high. Under the box is a board of the same width and length, with narrow strips nailed on the edges to keep the honey from running over the side. One end is raised, and the honey drains from the other into some large vessel, half barrel or firkin. The particles of combs will all rise to the top in a day or two, it can then be drawn from a tap near the bottom perfectly clear. To prevent its becoming very hard in cold weather, put two gills of water to ten pounds, mixing thoroughly. If preferred in the solid form, fill shallow dishes to the depth of an inch, and expose it to the coldest weather for a few weeks. Metheglin and vinegar may be made very cheaply from the refuse of strained honey. After all has drained out that will, cover with boiling water, or scald over the fire, stirring thoroughly. Let it stand a day or two, when it may be drained from the combs the same as honey, then boil and skim till clear. The strength may be tested with an egg, when the upper side rises an eighth of an inch above the surface it will do. It is put in some convenient vessel and allowed to work, when it may be closed up and set away to grow better with age. For vinegar, add about three parts of water to one of the above, and then manage as with cider, or other material used for the same purpose.

Combs that have been soaked in water, will soon spoil with mold. They should be immediately made into wax. These, together with old pieces of dry combs, when in small quantities, may be put into a sack of loose texture, with a small stone to make it sink, and kept in a kettle of boiling water, frequently pushing it about till the wax ceases to rise. It is skimmed off, remelted, and cooled in any desirable shape. For large quantities, the process is facilitated by having a large kettle and an apparatus for squeezing it, using two or three sacks; one is filled and put in the water and the wax melts while another is being squeezed out. Particles of wax in the refuse when exposed to the air, and slightly pressed in the hand, indicate whether it is worked out sufficiently clean or not.

The surplus honey for market is usually forwarded this month and next. If in small glass boxes, it should be packed in cases holding what may be easily handled—fifty or a hundred pounds. It should be secured by close packing from sliding about in the case. And when shipped, *secure careful handling*, otherwise the combs will be broken and the value materially lessened. It requires more care than a package of eggs.

New American Cyclopedia—Vol. XIII.

The thirteenth volume of this magnificent work is now issued. This volume contains 807 pages, and extends down the alphabet from PARR, to REDW. We also find 1550 different topics discussed, which allows an *average* of over half a page to each subject. The size of the volume is 10 inches long, 6¼ inches wide, and 2½ inches thick. We mention these items, to give a better idea of the magnitude of the work when complete in 16 volumes. It will then require over a yard of shelf-room. Allowing 1500 articles to the volume, which is rather below the average, the Cyclopedia will give pretty full information upon 24,000 different topics, all arranged in alphabetical order, and the average space to each being equivalent to about three-fourths of a column of the *Agriculturist*. The more important topics have, of course, a proportionate share of space; thus, in the volume before us, the Pigeon occupies 9 columns; Pottery and Porcelain, 17 columns; Preserving Wood, 3¼ columns; Philadelphia, 15 columns; Pine Apple 1¼ columns, and so on, each article giving about all that most people would desire to learn on the several topics. Other articles have ¼ to ½ columns each, as Pastel, Patmos, Patrick, Pawnee, Peddler, Penny, Peon, etc. From the above, our readers will be able to form some opinion of the extent and value of the work. See further notes under premium 11, page 315.

To Tile Machine Manufacturers.

We have very frequent inquiries respecting tile machines. There are many kinds of machines made in different parts of the country, and in order to become posted up in the matter, we request all persons who are manufacturing such machines, to send us their address, and such particulars, as may help us to a knowledge of their implements. We solicit similar information from others.

Into which are thrown various useful or interesting Items, Replies to Questions, Extracts from Letters, Gleanings from other Journals, etc.

No more Special Premiums.—Some persons are still applying for the Special Premiums, formerly offered by the Publisher for a specific time only. The standing premiums on page 315, are all we now offer, except the extra numbers offered on page 320. These are large enough, surely, and will well reward those who get up clubs. Take a look at them.

The Premium Strawberry Plants were all sent off at the earliest moment practicable. A number of persons sent orders to us that should have gone to regular dealers. Though not in our line, we have tried to accommodate them as far as possible. We do not keep varieties for sale, and in some cases the orders were slightly varied, necessarily, by those who filled them for us. We trust all have received the plants in good order.

Plants by Mail.—We commenced putting up our strawberry plants in tin boxes, but by a new rule of the Post Office Department, the boxes were excluded. No plants can go at the lower postage rates, unless open at one end, so as to be inspected. They can be nearly inclosed in oiled silk or muslin, and we have as yet heard of no failure among the hundreds of parcels we have forwarded thus put up.

The N. Y. State Agricultural Fair, unfortunately for us, is just opening as we go to press. By telegraph we hear that it promises to be much more successful than the state of the country and the occurrence of a storm on the first day, would promise.

Fall Exhibition of the Brooklyn Horticultural Society.—The Annual Fall Exhibition of the Brooklyn Horticultural Society is in progress as we go to press. (Sept. 19.) The display is in some respects the finest ever seen in Brooklyn, if not in this country, particularly in Green and Hot-house plants. Those having ornamental foliage are in fashion among amateurs, and beautiful specimens are on exhibition. Parsons & Co., of Flushing, contribute a splendid collection of Marantas, Caladiums, Tradescantias, Begonias, Cissus, Ferns, etc. Excellent collections are also shown by Andrew Bridgman and Isaac Buchanan of New-York, and Louis Menand, of Albany. The latter gentleman exhibits two banana trees, one in full fruit ; these and two specimens of the screw pine (*pandanus utilis*) attract general attention. An india rubber tree, contributed by John Humphrey, of Brooklyn, is particularly noticed ; also a magnificent *Alocasia Metallica*, with leaves like large plates of the richest bronze.

Fruits and flowers seem to have suffered considerably from the dry Summer, judging from the comparatively meagre display, which, though good in some respects, does not equal that of last year. Ellwanger & Barry, of Rochester, N. Y., show 135 varieties of pears, and 67 of apples. H. B. Shaw, of Newburgh, N. Y., shows a large variety of grapes, including splendid bunches of the Delaware, weighing 9 ounces each. A good collection of hot-house grapes was contributed by Mr. Cowan, Glen Cove, L. I. The most noticeable features among the flowers are a magnificent show of Dahlias, by C. S. Pell, of the New-York Orphan Asylum, and a large collection of Asters, from the French Nursery at Gloucester Landing, N. J. A Scotch thistle, grown from seeds taken from the grave of the poet Burns, by C. B. Miller, Secretary of the Society, attracts much attention. The exhibition held in the Academy of Music, the largest public hall in Brooklyn, is thronged by visitors, and is generally considered the most successful one yet had.

The Fruit Growers Society of Western N. Y., will hold its next Meeting at the Court House in Rochester City, commencing Oct. 1st, at 11 A. M.

Cold Grapery Queries.—J. D. Lyman, Stafford Co., N. H. (1) It would hardly pay to have a cold grapery only 10 feet long. (2) The ends may be of the same material as the front and rear. Glass may be used, but is not necessary, if the roof fronts the south. (3) The glass cover will be needed at all times of the year, even in July, to regulate the temperature in our climate of sudden changes, where the temperature varies 30° or more in 24 hours. It is safer to lay grape vines down in very cold weather and cover with soil. (4) Peach trees protected by glass, and shaded from the hot sun, will seldom be injured in any temperature in New-Hampshire. A few evergreen branches, hung upon the tops of the peach trees to keep off the sun, will be an additional safeguard in very cold localities. (5) Simply leaning sashes against a building would not be convenient. They need to be under good control (see 3 above). A good border, protected by the lower wall, is desirable.

Failure of Orchard Houses.—Growing fruits under glass in large quantities, is coming into very general use in England and on the Continent. This year there has been a considerable number of failures even in orchard houses. Mr. Parsons suggests, in the Gardener's Chronicle, that one cause of failure is the lack of bees in such houses to distribute the pollen. The absence of these is the more serious, as there are less breezes in these confined structures to blow the pollen from plant to plant. Mr. P. advises distributing the pollen with a camel hair brush, in the middle of a warm sunny day. Could not a bee-hive be kept in each orchard house, and thus obviate the tedious process of hand impregnation ?

Hot-Beds for Drying Fruit.—"H. P. S." of Morrisania, N. Y., writes that he makes a temporary floor in a hot-bed frame, on which the fruit to be dried is spread, and the sashes then laid on. When the sun is too warm, a little air is let in, but the sashes are kept closed at night. In this way the fruit is kept free from dust and insects, and dried in a few days. This is a good plan, and has been previously recommended in the *Agriculturist*.

Protecting Blackberry Canes.—A Subscriber at Concord, N. H., states that in that latitude, New Rochelle blackberries are winter-killed, two years out of three, and inquires how to protect them. Lay the canes down carefully in the Fall, before heavy frosts come, and cover them with an inch or two of earth. They are to be uncovered and staked up again as soon as danger from frost is past. Or the plan proposed, to remove them to a border near a fence, and set up corn stalks against them, would probably succeed, if mice do not trouble them.

Potting Strawberry Runners.—C. S. Pell, of the New York Orphan Asylum, has exhibited at the office of the *American Agriculturist*, strawberries grown in pots directly from the runners taking root in them. He procures "thumb" pots of two to three inches in diameter, for 50c. to 75c. per 100, fills them with earth, and beds the runners one in each, at the point of starting a root. The plants are well rooted in two to three weeks, and they may be turned into the soil at any time in September or October, and yield a fair crop the next season.

Apples in Newspapers.—J. Thomas, New Garden, Md., writes that last Fall he treated his apples as follows. They were carefully picked and kept in a cool place until freezing weather commenced ; then, after assorting, the sound ones were placed in boxes a foot deep, with a newspaper at the bottom, and between each layer of apples. Bellflowers packed in this way came out sound on the 1st of March. This requires considerable trouble, but may answer a good purpose for keeping a few apples of choice varieties.

Grape Layers.—H. A. Sheldon, Addison Co., Vt. Layers of grape vines put down this season, may be severed from the parent vine late in Autumn, after the growth and flow of sap is over, or at any time during the Winter before the sap starts in Spring. The transplanting of the layers should be deferred until Spring.

Cassabar or Persian Melon.—Specimens sent to us by Geo. A. Elston, Chester Co., Pa., proved quite equal to anything in the melon line that we have tried this season. They are shaped like the old fashioned muskmelon, one foot long and 5½ inches in diameter, rough skin, flesh thick, green color, very sweet and rich, No. 1 in every respect. We hope to have seeds to add to our free seed distribution next Winter.

Best Lawn Grass.—To many inquirers. We are at loss what to recommend. Most persons advise a mixture, and the seedsmen keep on sale lawn grass made up of several kinds, including white clover which is liked by many. Our taste is to use only one kind of seed, so as to have an even, uniform grass plot. Last year we sowed the Italian Perennial Rye Grass very thickly. It came up quickly, and in five weeks we had a most beautiful lawn, which was frequently cut, and showed finely all Summer. But it killed out badly during the last severe Winter. We dug up the lawn in Spring, and sowed it thickly with Kentucky Blue Grass. It came up very slowly, and for a time we felt disappointed. But it looks very well now (Sept.), and we have no fear of its being winter killed. Our present first choice would be Kentucky Blue Grass, and we think we shall not miss this time, as this is certainly hardy. It may be sown at almost any season.

Protecting Trees from Rabbits.—"Henry," Whitesides Co., Ind., writes to the *American Agriculturist* that a mixture of lard and sulphur applied to the trunks of young trees will prevent rabbits from gnawing them. He says he obtained the directions from a nurseryman who paid ten dollars for the recipe, and who had found it a sure preventive.

Sowing Osage Orange Seed.—D. K. McClure, Dauphin Co., Pa. Seed may be put in boxes of earth this Fall, and be exposed to freezing during Winter. Drainage should be provided at the bottom of the boxes to let out the falling rain. In the Spring sow the contents of the boxes, soil and seed together. Osage Orange Seed is now retailed at 75 cts. a quart in this city.

Stacking Beans.—J. T. W., Suffolk Co., N. Y., makes a "stack pole," by boring two ¾ inch holes through a strong pole, and driving in pins for cross work. These pins extend about one foot from the pole, and a strong barrel hoop is nailed to the ends, making an open platform for the beans. The pole is set firmly in the ground, with the cross work 18 inches above the surface. The beans are then laid on in a circle, with the roots in the center against the pole, and elevated a little higher than the tops, so as to turn water. When sufficiently dry, the poles are lifted, and the beans laid upon the wagon for carting in.

Straw for Feed.—J. W. Sage, Huron Co., O., inquires whether it will pay to store straw in the barn after threshing, to be fed out in Winter. That depends upon the abundance and cheapness of hay, and upon the quality of the straw. Good Oat Straw, run through a cutter, and mixed with a little bran or shorts, will be almost as valuable as hay. Where hay is plenty, we should give it the preference, except for an occasional change. If straw is to be fed, it will undoubtedly pay to store it under cover, if there be room.

Immense Stock of Grain.—There were stored in Chicago at one time, last month, *four and one-third* million bushels of grain. Put this upon wagons in loads of 40 bushels each, and it would require 180,333 teams to draw it. Allow 44 feet to each team, and place them along the shortest railroad route to this City (908 miles), and the line of wagons would extend all the way from Chicago to New-York City. The above refers only to the amount of grain in Chicago at one time. The annual receipts there are many times larger.

Still Larger Grain Figures.—The Wheat, Flour, and Corn, exported to foreign countries for the year ending Sept. 1, 1861, equaled 54,330,995 bushels of grain. This divided into loads of 40 bushels each, would require 1,358,025 wagons. Allowing 44 feet for each wagon and team, the line would extend 59,753,100 feet, or 11,317 miles ; or nearly half way round the globe ; or they would form more than three continuous lines of teams all the way from New-York to London.

How Much Wheat to the Acre ?—The largest yield of wheat which has been communicated to us, is that raised by Samuel Charlsworth Esq., Winnebago Co., Wis., who harvested *sixty-three* bushels from a single acre. Has any one done better, and if so, *how* was it done ?

Large Potatoes.—Bradford Deane, Boone Co., Ill., writes that he raised four potatoes weighing in the aggregate 22 lbs. ! The largest weighs 6 lbs., the smallest 5 lbs.

Scalding Onion Seed.—"W. O. K." writes that a paragraph has been going the rounds of the papers to the effect that scalding water poured upon onion seed will cause it to germinate in a few minutes. He says he tried it, and lost all his first planting, not a seed coming up. It is often useful to soak seeds in *tepid* water immediately before planting, but few will bear to be scalded, except those enclosed in a tough, horny shell, like the locust, which require soaking to liberate the germ quickly.

Destroying Earth-Worms.—A subscriber writes that earth-worms, which are sometimes troublesome in pots of house-plants, may be destroyed by watering the soil with common ley of wood ashes ; this application will also benefit most plants.

What Next ?—One of the latest novelties in the way of Magazines, is Mrs. Demorest's "Quarterly Mirror of Fashions." On opening a number the other day, we found a considerable mass of thin, strong Vanilla paper, folded down to Magazine size, and fastened in. On refering the matter to the "Home Department," the aforesaid paper was found to consist of three full size patterns for cutting the latest styles of ladies' dresses now in vogue, to wit: the "Gored Dress," "Gored Sleeve," and "Ladies' Zouave Jacket." This sending of actual patterns, instead of diminutive pictures of them, is certainly a novelty in the way of fashion Magazines.

Wheels on Plows.—David White, Bergen Co., N. J. The best way to secure a uniform depth in plowing is to use a wheel under the end of the beam. An unskillful plowman can make better work with this addition, than can be done by a good plowman without it.

Home-made Native Grape Wine.—J. L. Lockwood, Fairfield Co., Ct., presented us recently with a specimen of native wine, which is pronounced good by judges of the article. It was made thus: For a 22 gallon cask, 4 bushels of ripe wild grapes were taken, and after throwing out the decayed berries, all the good grapes were mashed and the juice pressed out through a coarse bag. This was put into the cask with 60 lbs. coffee sugar, and water enough added to fill up to within an inch of the bung. The plug was driven in tightly, but through it was introduced a bent or syphon tube, the inner end remaining *above* the wine, and the outer end dipping into a vessel of water which was always kept replenished as it dried away. This arrangement permitted the escape of gases, but excluded the entrance of air. The whole remained in this position until the last of April, when the clear wine was drawn off and bottled.

"Guinea Dwarf Pea."—T. J. Swan, Meade Co., Ky., sent us, June 25, a package of peas under the above name. They were planted immediately, and were ready for cooking in six weeks—rather earlier than the Daniel O'Rourke. They prove to be what is known here as the "Strawberry Pea;" in France as the "De Grace," and in Germany as the "Buchsbaum," or box-tree pea, because they resemble in size and growth the box plant used for edgings or borders. Indeed, they are much used there as edgings for kitchen garden beds. There are several varieties, which differ but slightly from each other, all being very dwarf—not more than 6 to 8 inches high. They are convenient and pretty, but not adapted for a general crop, as the short vines bear too few pods, and the berry is small, and not equal in flavor to larger sorts.

Large Wheat Heads.—Charles Potts, Schuyler Co., Ill., sends to the office of the *American Agriculturist* two wheat heads, each 6½ inches long, taken from his field. They were selected to compare with the samples of the Giant and Hallett's, illustrations of which have appeared in this journal. If pains were taken by wheat growers to select such heads for seed, year by year, greatly increased production would result. Read article on the subject on page 295.

Apples and Wheat from Minnesota.—A few days since we received a neatly packed box, per express from St. Paul, Minn., (all expenses paid,) which contained samples of apples and Spring Wheat, sent by Mr. Martin D. Clark. The apples are of the late Strawberry variety, from trees taken to Minnesota from Buffalo, in 1858. They are beautiful specimens, much larger than the same variety grown here, such as would do credit to any orchard. One of them measures 12¼ inches in circumference, and weighs 12 oz. Mr. Clark writes that he sent them to disprove the idea that apples can not be raised in that section. The Wheat is the Rio Grande variety, is of the best quality, and speaks well for the soil and the cultivation.

Cotton from Milk-Weed.—"Bridge water," suggests a trial of the silky fibers of the common milkweed (*Asclepias cornuti*), as a substitute for cotton, or perhaps for silk. The seeds are attached to the stalk by a fine glossy substance, which, if it possess the requisite strength, may be worth experimenting with. It is a very hardy northern plant, prolific in seed-pods, and would doubtless be improved by culture.——The *if* will doubtless be in the way. Our impression is, that the fibers are entirely too fragile to serve any practical purpose.

The California "Soap Weed."—In answer to an inquiry in the September *Agriculturist* respecting this plant, Prof. George Thurber, of the Michigan State Agricultural College, writes: "The plant alluded to is doubtless the *Amole* of the Mexicans, and is known to botanists as *Chlorogalum pomeridianum*. A figure of the plant will be found in the 2d volume of the Report of the United States and Mexican Boundary, plate 60. The plant is a perennial; its bulb when bruised yields a mucilaginous juice which when mixed with water causes it to froth in the same manner that soap does. This, or an allied species, is much used as a detergent throughout Northern Mexico. Its medicinal qualities are probably not more marked than those of Slippery Elm bark or Sassafras pith. I am not aware that a chemical examination has been made of it, but it probably contains a principle analogous to saponine."

Three Specimens of Millet.—J. W. Grier, Adamsville.—No. 1 is panicled millet (see page 298). Nos. 2 and 3 are club millet, No. 2 being the Hungarian millet, or so-called "Hungarian grass."

Burning over a Meadow.—Almon J. Pierce Van Buren Co., Mich. Burning over a meadow after gathering the crops would be injurious to the following year's growth. Many of the roots would be killed by heat, and the remainder being left unprotected by destruction of the young growth above them, would suffer severely during the Winter.

Open Ends of Drains.—"Iowa Subscriber." The lower end should be well open to admit air, but be secured with wire or iron rods to shut out mice and toads. The upper end should be closed to compel the air to ascend through the soil from the whole length of the drain.

Water through Cement Tiles.—Delos C. Ransom, Erie Co., O. As usually mixed, that is one part of hydraulic lime, and one to two parts of sand, the cement formed will not admit water through it. Indeed the walls of cisterns are made to hold water by plastering with such a composition. A company in Brooklyn are manufacturing tiles by a patent process in which pressure is used, and a smaller quantity of lime is required. These tiles allow considerable water to pass trough their sides. This is not essential, however, for the *joints* of drain pipes admit water as fast as it can be carried off. See July *Agriculturist*, page 201, bottom of middle column.

Amount of Honey needed by Bees.—J. F. Lester, Ill., writes to the *American Agriculturist*, that fifteen swarms of bees kept in the cellar last Winter 2½ months, each consumed on an average 6½ lbs. of their stores. As this is about one third of the time bees consume stored honey in a northern latitude, it follows that not less than 20 lbs. will be needed to cary them safely through the Winter.

Candy for Bees.—J. F. Lester, Ill., asks for a recipe for making candy from brown sugar, on which bees can be fed without waste. M. Quinby, gives the following directions: Add water enough to dissolve the sugar over a slow fire without burning. Take off the scum as it rises. To prevent its graining and becoming sugar again, add some acid. A teaspoonful of cream of tartar will be sufficient for 20 lbs. Evaporate the water by boiling slowly till it is brittle on cooling. Lay white paper on the bottom of some shallow dishes, and pour it on, making it into thin cakes, and it is readily broken into suitable pieces for use. Bees can not be sustained on this alone, they must have some honey in connection with it. They have starved with a full supply in reach, even when water was given to assist in dissolving it. It may be valuable when given before the honey is exhausted. Those who have tried feeding sugar in the form of syrup, about the consistence of honey, speak of it very highly. It is preferred to candy, where both have been tried, yet it is more trouble.

Oil Cake for Bees.—T. S. Wilson writes to the *American Agriculturist*, that oil cake mixed with water, to form a thick paste is excellent food for bees, of which they are very fond. This does not seem natural.

Twenty Bushels of Army Worms.—Mr. Ransom, of Erie Co., O., whose letter of August 9, came to hand too late for notice last month, reported the ravages of the army worm as quite severe in that and adjoining counties. One 48-acre plot of oats was entirely spoiled. Plowing furrows across the field to catch the worms, and burning straw in them was resorted to. He says one of his neighbors estimated that he had in this way killed at least *twenty bushels of worms*!

Scrubbing Pigs.—Charles F. Raymond, Fairfield Co., Conn., writes that a gentleman with whom he worked, bought two very unpromising pigs of the common breed, which he scrubbed regularly every day for a month, and afterward occasionally used a currycomb and brush. They were fed with sour milk and corn, and when dressed at the age of nine months, one weighed 306 lbs., the other 296 lbs. The cleansing of the skin undoubtedly favored their growth.

Convenient Pig Trough.—A Subscriber sends us the model of a pig trough by which the animals are prevented from "putting their feet in it," and from crowding each other. It is a common trough with the addition of slats upon the top wide enough to separate the pigs while feeding, and having an inclined board lengthwise, along the top, to keep them from jumping over to the wrong side. The feed is poured in through a small hopper fitted into the back side of the trough.

Relative Size of Animals and Plants.—Dr. Dick estimates the largest whale to be 34,560,000,000,000,000 times as large as the smallest known animalcule. The largest tree of Guiana he estimates to be 2,985,984,000,000,000 times as large as the rose-leaf plant.

Rats and Mice may often be caught by baiting the trap with flax, cotton, wool, etc., which they will try to secure for making their nests.

Destroying Muskrats.—Ephraim Montague Hampshire Co., Mass. These animals may be destroyed by feeding them slices of sweet apple sprinkled with a little strychnine. When thus poisoned their skins should not be used, and the carcases be kept away from hogs.

Fish Culture.—Several subscribers ask for practical information on this subject from those who have experimented successfully. Who will furnish the facts?

Preserving Eggs.—S. V. V., and other recent inquirers, will find a chapter on eggs in the *August Agriculturist*, page 246. A new plan is *proposed* on page 309.

Dissolving Bones.—D. W. Bliven, New-London Co., Ct., writes that last March he dissolved 500 lbs. of bones in 100 lbs. of Soda Ash in water, adding 50 lbs. of unslacked lime, and it has done well as a manure. He asks if the preparation is as valuable as if sulphuric acid were used. This depends much upon the character of the soil, we suppose, and can be best decided by trial. On cold, sour land, the alkaline preparation would probably be preferable; while on other soils the acid solution would be likely to be most effective.

Cultivated Land in Ireland.—Ireland contains very nearly twenty one million acres. Twenty years ago thirteen and a half million acres were returned as "arable land," that is land cultivated with the plow, leaving seven and a half million acres as waste land, or only adapted to pasturage. By draining, partly by private enterprise and partly by the aid of Government loans, the arable surface is now increased to nearly sixteen million acres—a gain of about twenty per cent in the amount of tillable land.

"Information Wanted" from Practical Men—$240 offered in Cash Prices.

Winter Wheat—Rye—Fattening Hogs, etc.—Winter Feeding of Stock—Spring Wheat—Oats—Corn—Apples—Peaches—Blackberries and Raspberries—Family Vegetable Garden—Flower Garden.

TIME EXTENDED.

Under the above head we last August called for a series of essays, or details of experience and observation, from practical men, and offered the following Prizes or Premiums for the most valuable one in each class.

1—*Culture of Winter Wheat*, $25—Not to exceed 20 pages of manuscript, and to be sent in, on or before Sept. 1. (Time extended to Nov. 30.)*

2—*Culture of Rye*, $15—Not to exceed 15 pages—Sept. 1. (Time extended to Nov. 30.)

3—*Rearing and Fattening of Swine*, $15—Not over 15 pages—Sept. 1. (Time extended to Nov. 30.)

4—*Winter Feeding and Care of Stock*, $20—Not over 20 pages—Oct. 1st. (Time extended to Nov. 1.)

5—*Culture of Spring Wheat*, $20—Not over 15 pages—Nov. 25.

6—*Culture of Oats*, $15—not over 10 pages—Dec. 2.

7—*Culture of Indian Corn*, $25—Not over 20 pages—Dec. 2.

8—*Growing Apples*, $20—Not over 20 pages—Dec. 2.

9—*Peaches*, $15—Not over 12 pages—Dec. 2.

10—*Blackberries and Raspberries*, $20—Not over 15 pages for both—Dec. 2.

11—*Family Vegetable Garden*, $25—Not over 25 pages.—Dec. 2.

12—*Flower Garden*, $25—Not over 20 pages—Dec. 2.

EXTENSION OF TIME.

Many who desired to write for the prizes, complained that the time allowed for the first of them was too short after they received the August *Agriculturist*, to allow them to prepare the essays before Sept. 1st, and only a few wrote, and then in a hurried manner. Our aim was to get these contributions in early enough to be of use this season. But owing to the brief time allowed, and to the war excitement, the efforts so far made, have not been up to what we wish to call out. We have therefore extended the time of the first four premiums, as noted above. (Those who have already sent in their articles, can withdraw them, if they desire, and send in again before the expiration of the extended time.)

FOR FULL PARTICULARS AND SPECIFICATIONS in regard to the prizes, character of the essays, etc., see the *August Agriculturist*, copies of which can be had on application by those intending to compete. Let no one hesitate to offer his contribution, because he is unaccustomed to use the pen. The one who gives the most *practical information*, in the plainest language, will be the one to receive the prize in each case.

* CHANGE OF WHEAT PREMIUM.—In accordance with numerous suggestions, we will make the following change in the Wheat prize: Instead of $25 for a single essay, we will offer two prizes of $15 each, viz., one of $15 for the best essay on growing wheat in the New-England and Middle States; and one of $15 for the best directions for cultivating wheat in the Western States, particularly on the prairies. The specifications for each will be the same as first given for No. 1, in the August *Agriculturist*.

Prospects of Farmers—Immense Sales of Flour, Wheat, and Corn.

Scarcely had our September issue reached its readers, before a *temporary* downward turn occurred in the prices of breadstuffs. This was to be expected, in the natural course of trade and speculation; but a subscriber seized upon the occasion to send us a sharp lecture upon the hopeful prospects, we held forth last month. He complained that we had induced him to hold on to his flour, and "now it was getting lower every day." The only answer we have, is, to point him to the present "prices current," given on page 316. And, by the way, every reader will be interested in our Market Review this month. In some respects it is the most important one we have ever published in the *American Agriculturist*. The tables giving a summary of the transactions in breadstuffs, both for a month past, and for the grain year ending Sept. 1st, are of the highest moment.

The sales in this market alone have reached the unprecedented figures of 5,473,125 bushels during the past 27 business days. The sales of flour have been 533,812 barrels, equivalent to over 2,500,000 bushels of wheat—the total sales of wheat and flour being equivalent to about **8,000,000** bushels of wheat. And a very large portion of this has been sold for export to other countries.—Do we need any better evidence of the correctness of the predictions of the *American Agriculturist* for months past, that foreign harvests would turn out greatly deficient this year? We say again, that there is, and is to be for some time to come, a heavy demand upon our markets to supply the deficiency in breadstuffs in Great Britain, and especially in France, and to some extent in other parts of Western Europe. This statement is founded not only upon the condition of the weather, at the time of the last Autumn sowing, and afterward, but also upon our full information, private and otherwise, derived from various foreign sources. Were we now importing foreign manufactures as freely as usual, the demand upon us for breadstuffs would be almost unlimited, and at high rates. As it is, all the surplus we can well spare at anything like the present prices, will be called for abroad, even if to be paid for entirely in gold.

We have also prepared for the *American Agriculturist* a summary of the exports for seven years past. (See page 318.) Those tables show that during seven years we have exported **62,816,478** bushels of Wheat; **9,132,593** barrels of Flour (equivalent to, say 45,662,965 bushels of wheat), and **37,100,254** bushels of Corn. But of this there has been exported for the grain year just closed, **29,005,866** bushels of wheat, which, with the 2,703,790 barrels of flour, is equivalent to *forty-two and a half* million **(42,524,616) bushels of wheat,** at the usual estimate of five bushels of wheat for one barrel of flour. It will be seen that *during the past year we have exported* **29,005,866** *bushels of wheat, against only* **33,810,612** *during the whole of the six preceding years!* The exports of corn for the past year amounted to 11,806,179 bushels, against 25,294,075 for the six years previous.

Reckoning the flour as wheat, our exports of Wheat and Corn, for the past year, have reached *over fifty million* **(54,330,995)** *bushels!* And our Western granaries are by no means exhausted. The arrivals in this city since our last report (27 business days), have been 479,800 barrels of Flour, 3,401,000 bushels of Wheat, 3,605,000 bushels of Corn, 398,969 bushels of Oats, 45,159 bushels of Rye, and 65,925 bushels of Barley—equivalent to very nearly (10,000,000) ten million bushels of grain! The amount brought forward has only been limited by the capacity of the canals and railroads. Much larger receipts would have found ready buyers.

It seems very evident that Providence has kindly prepared our country for its present trials, so far as its material interests are concerned. Never before was there an equal surplus of breadstuffs; never before a greater foreign demand; never before so much solid gold currency on hand and available for moving the crops; and all these circumstances have come together. Our grain would be next to valueless, were not the surplus wanted abroad, while that demand would not avail us, had we not the surplus capital to move the grain. It is a long road that has no turn. For four years past the farming interest has been much depressed, by poor crops and by financial difficulties. It would now seem that the upward turn is at hand. The vast addition made to the currency of the country, in the issue of so many millions of Treasury Notes, can not do otherwise than make money plenty, and this will gradually, if not at once, increase the money value of all kinds of farm produce. Let the cultivators of the soil then take courage, and go to their labors with higher hopes and renewed zeal.

Treatment of Diseased Animals.

MR. EDITOR: I have noticed that the *American Agriculturist* contains very few recipes for the cure of diseased animals, and some of my neighbors think the paper is lacking on that account. One of them takes a journal that gives almost a column every week, telling how to cure every thing from a flea bite to a fistula, and he thinks these a great acquisition. In reading them I am reminded of the sweepings of an apothecaries' shop, for they often contain the oddest and most nonsensical compounds imaginable; acids and alkalies, astringents and cathartics, are mixed up at a rate that would puzzle nature to know how to act on an animal that should swallow a dose of them. I tell my neighbors your journal is guided by common sense, which is worth any amount of uncommon nonsense.

Many people have a notion that when an animal is sick, something must be done; they are not satisfied until a pint of soap, or ashes and vinegar, or some other vile compound has been forced down the throat of the patient. I have no doubt that a regularly educated veterinary surgeon can often prescribe good remedies, but I don't believe it safe for every body to dose animals according to their fancy, or according to recipes picked up from nobody knows where, and published in newspapers. If I have a sick cow, and can get no reliable medical man to prescribe, I generally let Nature have her own way, and I believe that is the best way in nine cases out of ten. It is the vital powers of an animal that must throw off disease. It takes long practice to know from the looks of a creature just what medicine will touch the right spot, and help nature's wheels to work.

In most cases I find that something else besides the animals need doctoring. For the hog cholera, for example, I should prescribe frequent doses of the manure fork and cold water in the pig-pen, with perhaps a surgical operation on the sides to let in light and air. Foot rot in sheep is best treated by digging trenches in the pasture, and putting in drain-tiles. A few "plasters" of clapboards on the old stable will cure a good many diseases in horses; and an operation with the hay cutter, the root slicer, and the steaming apparatus, will do more for the health of stock in Winter than all the balls and boluses ever dreamed of. In short I believe in curing disease by meeting it with proper remedies before it gets into animals. JONATHAN.

REMARKS.—"Jonathan" is about right. We could publish from our own contribution drawers, any quantity of "recipes" for curing every real or imaginary disease of human or other animals. But it would be worse than nonsense to do so; it would be holding up a false light to guide people astray. There are a few epidemical diseases which require a general treatment, and rules for such treatment may well be published; but for nineteen-twentieths of the ailments of man or beast, the best possible medicine is a very large, long continued dose of nothing at all. If a man, or horse, or cow, is troubled with irritation of the bowels, the best general treatment is to abstain from all food for a longer or shorter time, and let nature have a chance to exert her healing or recuperating powers.

About Improving our Animals.

Last month we recorded the fact that Mr. Taylor paid $1300 for a single sheep—a two-year-old South Down ram. The expense and risk of getting him from England to the New-Jersey farm will probably run the total cost above fifteen hundred dollars! Mr. S., a neighbor of Mr. Taylor, has a sheep that will yield more mutton and perhaps more good wool, for which he would be right glad to receive fifteen dollars.—Mr. Thorne recently sold from his large herd of improved cattle, a Bull to go back over the ocean, the price paid here being two thousand dollars! A neighbor of Mr. Thorne, Mr. R., has an animal that out measures and out weighs Mr. Thorne's bull, and which will do more work, and yield more beef, yet the owner would be very glad to take $200 for him. Similar illustrations might be given in reference to horses, swine, and other animals.

Every man who breeds an animal for his own use or for market, is concerned in the question: Why this difference in the value of animals that for present practical uses are apparently very nearly on a par. Let it be distinctly understood that the high money values set upon these animals are not the mere results of whims or caprices. Mr. Thorne and Mr. Taylor, and others of their class, are men of too much good sense to throw away their money to gratify a whimsical fancy—they are very far from belonging to the order of "fast men." Here is the secret: The bull owned by Mr. R., if used for breeding, would be quite as likely to produce a progeny inferior to himself, as one inheriting his own good qualities. He is a *grade*, or mixed blood, and the inferior blood of his immediate ancestors will be likely to crop-out in his descendants. On the contrary, Mr. Thorne's animal is a pure blooded, pedigree animal; that is, he has come in a direct known line of descent from a long succession of good animals, and the race or family to which he belongs *has acquired the power of transmitting their good qualities.* Others are anxious to get at least an infusion of this blood among their stock, and are willing to pay well for it; hence the value of the family. The same thing holds true of Mr. Taylor's sheep. These animals are faultless in form and other

good qualities, and the power they have acquired of transmitting their qualities, is of the very highest value to breeders.

The lesson to be learned from these illustration is, that by careful selection of good animals for breeding, every owner of stock may improve the quality of his animals. A man begins this year and breeds together two or more pairs of the best he can find among his own stock—perhaps gets one of the pair from the best among his neighbors. From the progeny he selects the best again, and so on; and in the course of fifteen or twenty years he has five or six generations of pedigree cattle. The continuance of this careful selection will, in time, establish a family of thorough bred animals, of infinitely greater value for breeding purposes than the mixed races which contain many strains of poor blood. Every man can not hope to become a Bates or a Webb, but all can improve their stock from year to year, and at a cost that will pay. Here is an extract from the Oxford Journal (Eng.), which illustrates our subject well, and which gives an interesting history of the origin of the Duchess family of Short Horn (Durham) Cattle, to which Mr. Thorne's high-bred bull belongs:

"More than half a century ago, when Charles Colling's herd was sold, a young heifer, named Duchess, was bought by Mr. Thomas Bates, of Kirkleavington. From her has descended a tribe of Short Horns known as Duchesses, which are believed to possess all the leading merits of the breed in an extraordinary degree. In particular, they are possessed of a remarkably soft and silken touch—of abundant hair and other indications of vigor—of most symmetrical form—great and equal width of back, well arched ribs, and prominence and width of bosom. Several of this tribe were exhibited at the Royal Agricultural Society's Show at Leeds this year, and they were almost uniformly successful. Duchess 77, a three-year-old cow, which has carried off the first prize in her class whenever she has been shown, was first this year in the most remarkable class of cows that has probably been ever got together. Duchesses 78 and 79 (twins)—the one a roan and the other a white yearling heifer at the Canterbury Show last year—and then placed first and second in their class—were here shown in a very first-rate and numerous class of young cows, and they again occupied the head of the list. And it is not only in the pure bred Duchesses that this extraordinary merit appears, but wherever a cross of the same blood has been given, it appears to have unusual influence, and most of the prize-taking and commended animals owe their successful position at Leeds to influence of this kind. This is one of the results of what is called in-and-in-breeding. Animals which have inherited again and again in the course of their pedigree the qualities which relationship in blood has conferred in common, possess those qualities much more energetically than others do in whom they are observed for the first time.

A cross-bred ram may have a very desirable coat upon his back, and a very well-made carcase of mutton within that coat, *but it is exactly a toss up whether his progeny acquire the character of his sire or that of his dam. If sire and dam for generations back have exhibited constancy and uniformity of character, then that character is certain to re-appear in their offspring, which in his or her turn will possess still greater power of transmitting good tendencies to the following generation.* It is thus that not only in the Duchess blood, but in other tribes descended from the Kirkleavington herd, we have as the result of Mr. Bates' resolution, patience, skill, and constancy, qualities which re-appear in generation after generation until an animal may now be safely characterised as good if known to be of Bates' blood. Bates' blood, or rather Bates' *brains*—for it is mental, and, in many important particulars, the moral character of the breeder which is reflected now in so many different herds—is merely another word for patient persistence in breeding from animals of a given type, in great measure disregarding the question of relationship, if they possessed the requisite health and vigor of constitution. Of course, when evils of any kind are inherited, as a tendency to disease or weakness of any kind, breeding in-and-in will intensify and hand that down with as much certainty as any other quality—but the natural law of breeding, which obtains among gregarious animals where the strongest sire is the father of the herd or flock—to the almost entire disregard of previous natural relationship—is a safe one to follow. It is a natural law of this kind that gives to particular herds and flocks where they have been long under the control of one man, their uniformity of character from year to year. The thing is as true in flocks of sheep as it is in herds of cattle; and Mr. Jonas Webb's flock of South Downs, which has just been scattered by the auctioneer to all lands, will no doubt perpetuate and extend the influence of Mr. Jonas Webb's skill and character just as widely as those of Thomas Bates are felt on both sides of the Atlantic at the present day."

Improving Plants of All Kinds—Important Suggestions.

A discovery recently brought before the British public, but scarcely heard of on this of the Atlantic, as yet, would seem to be of the highest importance to every cultivator of the soil—of a garden plot even. And as the experiments we propose can be made by every one, we ask the attention of all to the subject. In the preceding article we have given an outline of what has been done and may be done in the improvement of animals. The course pursued with animals, it is proposed to apply to the improvement of plants of all kinds grown from seed.

To illustrate, let us look at the origin of our different varieties of peas, taking the Champion of England for example. Less than a dozen years ago, a single pod of remarkably good peas was found in a plot. The cultivator saved this pod and sowed the peas it contained. The result was a small crop of peas resembling the original in general character and quality. The *whole* of the second crop was sown, and a third crop resembling the original was obtained. The process was continued, the *whole* crop being sown each year, and now the Champion of England pea is grown almost all over the world. But the general character of this variety is much the same as that of the second crop—probably inferior on the whole. There has been no special improvement made.

Now suppose that from the second crop the cultivator had, *after careful examination*, selected the very best single pod that could be found, and planted this alone. Would not the third crop have been better on the whole, than that obtained from sowing all of the second crop, good, bad, and indifferent? Suppose again, that from the third crop produced by the single pod selected from the second crop, the best single pod had been selected and sown, would not a still further improvement have been made?

The reader will note, that the proposed process is entirely different from the usual one adopted in producing or multiplying new varieties. In the latter case the whole product, or nearly the whole of the previous crop, is used in propagating and multiplying the variety. In the new process, it is proposed *to select each year only a single head, pod, or seed—the best among the whole—to be used for propagation.* The idea is, that not only will there be a decided improvement each year, but that this repeated annual selection will establish a pedigree, or breed, that shall be as valuable in plants, as it is now in animals. Reason, and the laws of production would seem to be stronly in favor of this result. The Duchess family of Short Horns have acquired the power of *transmitting* almost unfailingly the good qualities they have inherited. May not this power be similarly acquired by plants of all kinds, and that in a brief time. Three or four years are required for each generation of cattle, but in our field and garden crops propagated annually from seed, only a single year is required for a generation.

We propose to our readers that each one experiment in accordance with the above suggestions—in Spring upon field and garden crops, and in Autumn upon Winter grains. But little trouble will be required, while important results may be obtained. And, to illustrate what may be done, we will give an example of what has already been accomplished by Mr. B. F. Hallett, who is creating some sensation in England by his successful experiments upon wheat. Though we sent for some of his pedigree wheat, and gave it out to our subscribers, (see June *Agriculturist*, page 188,) yet, as we stated, we had some misgivings about the claims put forth for it. But in the Gardeners' Chronicle for August 24, the editor, the scientific Prof. Lindley, tells us he has seen Mr. Hallett's wheat in the field, and endorses the almost incredible statements put forth. The pith of the matter is this:

Some years ago Mr. Hallett selected the two largest heads he could find in a field of a valued variety of wheat called the "Red Nursery." The two together contained 87 kernels. (One of these heads is the smallest one shown in our June number). The 87 kernels were planted 6 inches apart each way. One of them produced 10 stalks, the heads yielding 688 kernels. The largest ten other heads from the whole of the remaining 86 kernels sown, produced only 598 kernels. The whole was planted separately, each kernel being numbered in the plot, and one grain from the largest of the first ten heads now yielded 17 heads (besides 5 green ones), which contained 1190 kernels. These 17 ears were planted and one kernel from the largest head among them yielded 39 heads containing 2145 kernels. We omit the details of the experiments with the produce from the other products of the original grain. It is sufficient for our illustration to show the increase from the original size and number of stalks. The first year the best kernel sown yielded 10 ears containing 688 kernels; the fourth year the best kernel yielded 39 heads containing 2145 kernels! One of these last heads was shown in our June number. A multitude of other experiments, carried on at the same time, showed a similar result from the successive repeated selection of the largest head from the most productive root or stalk, for propagation.

Cotton Growing in the Colder States.

We have recently had an interview with Capt. Richard Kendall, who was formerly connected with the United States Coast Survey, in reference to the feasibility of introducing into the Middle and Northern States, a cotton producing tree which grows in similar latitudes in South America. Capt. K., is quite enthusiastic in the opinion that the tree will flourish wherever corn will grow, and that it may become a source of great profit. He exhibits specimens of the tree and of the cotton, produced by him in Baltimore County, Maryland. The section of the tree we examined is a hard wood, two inches in

diameter, having five annual rings. The cotton fiber is long, fine, and silky, resembling and apparently equaling the best Sea Island Cotton.

Of the tree in its native habitat, in various portions of the Western Coast of South Africa, from the Equator to the Northern part of Patagonia, Capt. Kendall says it flourishes best in Southern Chili, in about 40° South latitude. He found it growing at an elevation of 7000 feet above the ocean, almost in the regions of perpetual snow. The tree resembles the white mulberry in general appearance of the branches, bark, and leaves, the average size and hight being about that of our common peach trees. It begins to produce bolls the third year from seed, and continues healthy and vigorous—according to the accounts of the natives—from thirty to fifty years. It attains its full size about the eighth year. It is propagated by seed and by cuttings. Near the tropics it is evergreen, and begins to produce seed the first year after sowing, but there it is only a shrub, growing five or six feet in hight. The tree is very ornamental, especially when covered with a profuse mass of flowers that resemble the double hollyhock, though less in size.

Capt. Kendall is now stopping in this City and would be happy to communicate with any of our leading agriculturists, or nurserymen, in regard to the feasibility of making some effort to introduce the plant into the country.

How to Winter Cabbages.

To the Editor of the American Agriculturist.

The following method for keeping cabbages through the Winter, I have followed for twenty years, and find it to be the best I have seen. First dig a hole six inches deep, and large enough to contain about thirty cabbages piled in a conical heap. In the bottom of this pit lay dry hay or straw to the depth of three inches, when packed down. Cut off the stems of the cabbages to within three or four inches of the heads, remove only the decaying leaves, and pile them with the heads downward. Cover them with a good layer of dry hay or straw, and then with five or six inches of earth. Make the heap sharp at the top, and smooth the sides with a shovel. Lay a sod on the top of the heap to shed off rain. When opened in Winter to take out cabbages, stop the hole tightly with hay.

Allegany Co., Pa. SAMUEL POLLOCK.

REMARKS.—We question whether it would be safe, generally, to place cabbage heads together in a mass as above recommended. They are liable to heat, and one head or its leaves decaying, would communicate decay to the rest. We have found no simpler method than the following: Lay down poles or rails in pairs, on high dry ground, or on a ridge sufficiently raised to avoid water. Set a row of cabbages near together along each pair of rails, the heads downward. Spread a little straw over the heads, not under them, and put on a covering of earth pointed up well to shed off rain. The roots need not be covered. A little freezing of the cabbages does not hurt them when there is a sufficient coat of earth to "draw out the frost" gradually. Several of these rows may be placed side by side. The earth taken up for covering will leave open ditches between the rows, and by making outlets from these the soil is kept drained. In Winter, pieces of the bank of frozen earth, with a cabbage in each, may be cut off with an old ax, and carried into the cellar. The earth will gradually thaw off, leaving the cabbage heads in good condition for use.

For those wanted in early winter, a simple method is to sink a barrel in the soil and fill it with heads cut off from the stems, loosely thrown in. Cover the barrel with boards and a little soil, which can be lifted off and the heads taken out as needed. The cooler cabbages can be kept the better. A house cellar is too warm.

Another good plan is the following, where mice are not abundant, or can be kept out. Choose a dry plot of ground, square, or oblong, as large as wanted; dig a trench on one side, and *plant* a row of cabbages into it, covering the roots and stems nearly up to the heads. Then set out another row by the side of the first, and so on until all are put in. Build a bank of earth all around the plot, and lay poles or rails just above the heads, covering the whole with straw a foot or more deep. Put two poles on crotched stakes on two opposite sides, one pole higher than the other, and lay on boards for a rough temporary roof to shed off the falling rain and snow. The cabbages will not only keep well, but will even grow all Winter. The boards and straw can be removed at any time to take out what cabbages are needed. Except in the coldest weather, holes should be opened on each side of the pit to admit a circulation of air. The ventilating holes may be secured from mice by setting in them old wire sieves, and stopping them with straw when required to be closed in extreme cold weather. The bank of earth around the outside may be raised up to the board covering, so as to shut out the free entrance of mice.

Humbugs—A New Dodge.

Formerly we had frequent occasion to show up sundry plausible schemes to filch money from the unsuspecting. Latterly we have had little to do in that line—partly because our exposures have thoroughly put people on their guard, partly because the "hard times" rendered it less easy for the swindlers to get money, and partly because the army has absorbed a considerable number of those who formerly lived by their wits. The organization of the regiment of "Billy Wilson's Zouaves," has cleared our own city of not a few of the "gentry" who are now usefully serving their country in the fortifications on Santa Rosa Island, near Pensacola. But within a few weeks there have been indications that swindlers are beginning their operations anew. Our readers will do well to be on the look out for chances to buy good land at the East for a song, to make a fortune in the culture of newly discovered plants, and to realize sudden wealth by a variety of other sure methods. We shall have an eye upon the craft.

To begin with, here is a pretty scheme, to which we respectfully call the attention of the authorities of New-Hampshire. On Sept. 7th, a respectable citizen of New-Jersey (for whose real name we will substitute John Smith), received a letter from New-Hampshire, enclosing a ticket in a scheme, not called a lottery, and stating that hearing accidentally that he was a reliable man they took the liberty of presenting a ticket for their next drawing, stipulating that if he drew a prize he would make it known, thus advertising their business. Sept. 14th he received a printed slip, purporting to be the "*Grand Social Banquet, by the Mechanics Union Club, at the Union House, Holderness, N. H., Drawn on Thursday, Sept. 12th*, 1861, *under the management of Adams, Duncan & Co.*" Then follows a list of numbers, which are declared to have drawn prizes, such as: No. 1365 drew $2000.. No. 534 drew $1500....No. 3070 drew $300.. No. 842 drew $10...No. 3769 drew $100..and so on through some 250 numbers—with directions how to get the money—all in a very business like way. Now comes the gist of the matter. Along with the above announcement came the following letter, written in a fair business hand:

Holderness N. H., Sept. 12.

JOHN SMITH, Sir. I have just returned from the drawing; you will see that No. 3769 drew a prize of $100. Now I will tell you how to obtain this prize if you will assist me in selling Tickets which you can do by letting people know that you have drawn a Prize and informing them whom to apply to for Tickets. By your doing this I shall sell a large number of Tickets for the next Banquet in your vicinity. In order to have your Ticket good, you must have a certificate from the Managers. To get this you must send me a letter dated Sept. 12, and enclose $5 the price of the Ticket. As soon as Rec'd, I shall hand it to the managers saying this letter was miscarried but the money is all right. They will then send you a Certificate, after which you forward the ticket to them and receive the money by Ex. Send at once and don't show this letter to any one.

Yours Truly GEO. F. HAMILTON.

Well, Mr. Geo. F. Humbug, you mistook your man in this case, though we suppose you have got plenty of $5 bills from these who do not read the *Agriculturist*. Your "reliable man" happens to be a subscriber to this journal, and having, as he writes, seen our exposures of such as you, he disobeys your injuctions "not to show your letter to any one," and "sends it at once," to be published for the benefit of those disposed to invest in your "next Banquet." A private word, Mr. Hamilton. Can't you send us a free ticket for the next banquet in return for this "first-rate notice?" If in these hard times you send us a prize of $2000, or even $100, we will tell a hundred thousand people all about it. If you insist upon the $5 after *presenting* the ticket to us, why, you can just deduct it out of the prize money. Send by express. "Send at once."

Manure Cellars Under Barns.

In reply to "E," and several others, we say, that as frequently constructed, and advised, manure cellars under the barn or stalls, are an unmitigated nuisance. The vapors and odors rising, if allowed to ascend into the stalls above, and to spread through the hay and grain, are not only unhealthy to the animals, and injurious to the hay and grain, but they rot the timbers. But all this does not by any means condemn such cellars. We have one from which no such difficulties are experienced. The walls are laid in hydraulic mortar, and carried clear up to the floor, the boards over the walls and the timbers being imbedded in the mortar. The floor is double, the lower one of matched 1¼ inch pine plank, over which 2-inch matched plank are laid, inclining from the mangers to a gutter at the rear of the stalls, and also from the rear wall to the same gutter. The trap-doors for letting down manure are also double, and fit closely. No vapors can get from the cellar to the stalls.

Further, on one side the wall is built out in the form of an L, or square, 7 feet each way; that is, a part of the cellar is outside of the barn, which not only affords free escape for the moist vapors, but also supplies a broad opening for throwing out the manure. Where the hight of the barn or the elevation of the ground admits of it, it is well to let this outside opening incline gradually, so that a cart or wagon can be backed in to haul out the manure. Manure kept in such cellars is saved from the washing of rains, and is under control at all seasons. All the liquid droppings, litter, etc., are neatly and entirely saved from loss, and the better quality of the manure *pays*, which is the main thing.

Draining—Why—Where—How.

(*Continued from pages* 36, 70, 105, 137, 169, 201, 233, 264.)

SUNDRY HINTS.

DEPTH AND DISTANCE APART OF DRAINS.—These two topics are usually discussed separately but are closely connected. The deeper the drain, the greater the distance that it will draw water from the soil upon either side, that is within reasonable limits. It may be so deep as to fail to drain the upper soil at all. In compact clay soils, 3 feet, or at most 3½ feet, is deep enough, though when filled up for a foot or two from the bottom with stones or loose soil, it amounts to a double drain, and may be made deeper. In heavy clay soils, drains will not be effective for more than 12 to 15 feet on either side, and they

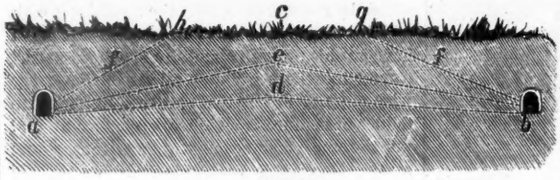


Fig. 34.

should therefore be placed only 25 to 30 feet apart. In more open, porous, or loamy land, water will work through the soil to a great distance, and drains may be placed further apart, generally not more than 3 to 3½ rods, if thorough effective draining be intended. Where the surface is quite sandy or gravely, for a depth of three or four feet, but lies upon a clay bed below which holds water in excess in the surface, drains may be 4 or 5 rods apart. The water will readily find its way into them. The soil between any two drains may be considered as a ridge from which the water flows down an inclined plane each way into the adjacent drains. Thus, in fig. 34, drains *a* and *b*, are, say four rods apart. —1st. If the soil be porous, the water from all the soil above the lower dotted line, *d*, will be carried off.——2nd. If the soil be but moderately porous, only the water above the middle dotted line, *e*, will flow off readily, and under *c* there will be but imperfect drainage.——3d. If the soil be a compact clay, only the water above the upper dotted lines, *f*, *f*, will readily enter the drains, and there will be a wet spot left at *c*. In the first case, 4 rods apart will be near enough. In the second, the distance apart should be reduced to 3 rods; and in the third case the drains should be only about 2 rods apart.——By placing the drains, *a* and *b*, deeper, the upper lines will be lowered, but their length will be increased, requiring the water to flow further through the soil.

It must also be taken into account that the deeper the drains, the greater is the cost of digging, comparatively. It requires nearly twice the labor to dig three feet deep, that it does to dig two feet; and a drain four feet is nearly twice as costly as three feet. It will therefore often be better, on the score of economy alone, to dig shallower ditches, nearer together.

Taking into account all the above considerations, we think, as a general rule, that in compact clay soils, the top of the drains should be about 2½ to 3 feet deep, and 25 to 30 feet apart. In loams admitting water through them more freely, the drains may be 3 to 3½ feet deep, and three rods apart. In still more porous surface soils, the drains may be four or more rods apart, and 3 to 4 feet deep. All drains should be placed below the possible reach of the common plow, or of the subsoil plow.

DIGGING DRAINS.

This has been mainly done with the spade so far. Several machines have been invented for this purpose, but we have seen none in operation which we are fully prepared to recommend for general use. There is here a good opportunity for ingenious inventors, and we know of no more promising field for the exercise of their skill. What is needed is a simple cheap implement that, when worked by oxen or horses, will excavate a drain three to four feet deep with rapidity and economy. We shall endeavor to keep our readers advised of any practical improvements in this direction. The cost of digging with a spade is not so great as many would suppose. The work may be done at odd spells, when laborers on the farm are not otherwise engaged. Cheap men, those who are skillful at few kinds of general work, can be employed to dig drains at a low rate. A great saving will be effected, if the digging be let out by the piece. For example, we once hired a man at a dollar a day (boarding himself), and set him to digging a drain averaging 3½ feet deep, and as narrow as he found it convenient to work in, which was 20 inches at the top and 12 inches at the bottom. For some time he opened only 3 to 4 rods a day. We then dismissed him, but offered him a dollar for every five rods, or 20 cents a rod. He demurred at this and left, but not finding other

Fig. 35.

work he came back and dug 2,000 feet at the rate of 8½ rods a day, thus earning $1.67 each day! He afterwards took another job at 16⅔ cents a rod, for 3½ feet in depth. The labor of digging can be much lessened, generally, by running a plow backward and forward several times. A good plow will throw out the soil to a depth of nearly a foot. Below this the soil can be loosened with a plow, and then thrown out with shovels. A single horse will walk in the drain, when three feet deep, and loosen a few inches at every passage of the plow. If the soil be very hard, two or more horses may be used in the ditch *tandem*—one before the other, (fig. 35)—and thus nearly all of the ground can be plowed. Or, a long double-tree, or even-

Fig. 36.

er, may be adopted, and one horse or a pair of them, or a yoke of oxen, be driven along on each side of the ditch. Or, still again, a pair of wheels and axle may be used, (Fig. 36.) For wide, deep stone ditches, a considerable portion of the digging may be done with a plow and a common road scraper. We have seen 2½ feet deep thus removed rapidly and economically, the top being six feet or more wide. The remaining depth, 2 feet, was loosened with the plow, and thrown out with shovel. The whole cost of digging 4½ feet deep was not quite 20 cents a rod. The earth was returned in the same way—the lower 2 feet with shovels, and the upper two with the scraper. For ordinary draining, perhaps the digging can be done at present with the spade, by contract, quite as cheaply as in any other way, especially where there are plenty of unskilled laborers at hand. For convenience of filling, it is best to throw the good surface soil on one side, and the poorer subsoil on the other, to be returned in the same order.

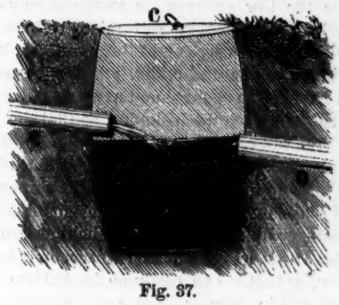


Fig. 37.

TRAPS AND OBSERVING HOLES.

In continuous drains of 400 feet or more in length, and especially if main drains, it is desirable to provide *traps* for catching clay and sand that may find their way into the drains. The trap may also answer for an "observing hole" to see how a drain is working at that point. It may also serve as a reservoir of water for animals, when needed for this purpose. A *trap* may be made in several ways. The simplest form is shown in fig. 37, where a hogshead is sunk in the soil. The water coming in through *e*, depositcs its sand and clay at the bottom, while the clear water flows off at the right through *o*. By removing the cover *c*, the sand accumulated at the bottom can be taken out whenever needed. The amount and regularity of the flow of water at that point can also be observed, and the supply at the bottom can be used for drinking, or for watering animals. In permanent drains it is better to construct these traps of more durable material than wood. A small cistern of stone or brick work, (fig. 38,) two or three feet square, plastered inside with hydraulic mortar, answers all the ends desired. The cover may be of plank, or a flag stone may be laid on. If to be used for obtaining water, the cover should be movable, and perhaps hung on hinges. Where only required for catching sand, and to be examined only once or twice a year, the cover may be sunk a foot or two below the surface, and covered with soil, which can be shoveled off when necessary.

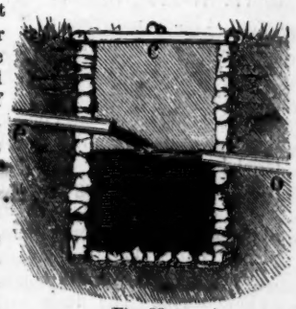


Fig. 38.

Such *traps* are sometimes made of cast iron, and only a few inches in diameter. These may answer when not too expensive, and where there is a considerable fall, and a good outlet to the drain. If it is desirable to render the water nearly pure as it passes through, the trap should be made 3 or 4 feet in diameter, and 2 or 3 feet in depth below the entrance and exit pipes.

A few Fall "Chores."

Spring work is hardly more important than Fall work. The latter should be done in its appropriate season, and done well. Some jobs can not be deferred until Spring, and others can be done now better than then.

One item, for many farmers, is the draining of swamp or bottom lands. They are rich in peat, or marl, or muck, which, if rightly used with manure, almost doubles the value of pure stable dung. Now is a good time to drain those lands, while the low grounds are comparatively dry, and before the heavy Fall rains set in. Cut good broad ditches straight through them, leading into some natural outlet, where the water will have a free channel and a good fall. Cut the sides of each ditch sloping, so that the soft dirt will not crumble and cave in and obstruct the channel. In a short time, this drained land will bear up teams, and so allow the farmer to haul out many a load of fertilizing material for his hungry uplands. Or, if the hauling can not be done now, let the muck be thrown up in heaps to dry, so that it can easily be loaded up and drawn out in Winter. Let every unemployed team bring forth the rich deposits, and draw them into the barn yard for composting, or take them out to the hilly lands, where they can be exposed to the air and frost, and perhaps mixed with lime, and so be got ready for next year.

Another item relates to shelter for stock. We are no advocates for fancy architecture in the barn-yard. Our rich neighbor, who paints his commonest barns and cattle sheds a pure white, does it on his own responsibility. He seems to like to see his Short Horns and Berkshires rub their dirty hides against his snow-white lead. This is not to our taste. Yet we advocate comfort for cattle, from the most brutish grunter up to the noble horse. Keep them comfortable, both in Winter and Summer. Keep them growing, or at least improving their condition, so as to be always ready for market, ready for use, or at any rate, in such a condition that it will be a satisfaction to look at them.

To this end, let the farm buildings undergo a thorough examination this month, and let material be provided for repairing them. This leaky roof must be shingled, or at least patched. Those loose boards must be nailed on, or if old and rotten, new ones must supply their place. Yonder, the seams have opened too wide between the half-seasoned boards; they should be battened up. The floors in those stalls are beginning to give way; they are worn and half-rotten. Now, right off, before those oxen and valuable horses have broken through and sprained their legs, we must put in some new planks; may be, some new joists beneath to support them. And these sheds around the yard and that lean-to, need righting up. That wide opening at the northwest corner, between the long barn and the corn-house, should be boarded up; the wind and snow drive in there unmercifully during the Winter.

Along with this work, let there go a thorough cleaning up. The manure so apt to accumulate under the barn floor, must be got out and wheeled into the corner for composting. The heaps in the corners of the sheds, and around the barn doors, the drinking troughs, and gates, should be scraped up and deposited where they will not waste. This will make the buildings sweeter and pleastanter, and the yards will be cleaner to the feet all through the rainy months.

The stock need looking to before they are taken into their permanent winter quarters. Not a few farmers keep them lying out too late, and on too short commons. Between this time and December, there will doubtless be much good pasturage, but after the frosts have become severe, grass is not very nutritious. It may be abundant, but after it has been several times frozen, it is little better than so much straw. Cattle often grow poor while standing knee-deep in such fodder. Probably, the cold rains, and sleeping on the cold ground, have something to do with their leanness.

Let it be repeated here, that stock should seldom be allowed to stand still in their condition; they should be kept growing if they are young, and improving if already grown. If under-fed or poorly fed, they recover but slowly—if at all. Let them have good food all through the Fall; give them shelter by night and in long storms, if they desire it. Bring them into their winter quarters strong and healthy. So shall it be well with thee, and with thy flocks and thy herds.

About Millet.

"Stray Millet"—A valuable variety from Wisconsin—The Utility of Millet as a profitable Field Crop—Millet a Substitute for Rice and other Grain as Human Food.

On the 16th of January last, "a subscriber," who did not give his name, sent us from Hudson, St. Croix Co., Wis., a sample of millet seed, which he said was known there only by the name of "stray millet." We sowed it May 8th in drills, on moderately good soil, naturally dry, and this year badly parched by the prevailing drouth. Aug. 8, just three months after the time of sowing, it ripened its seed, and we deem it worthy of special notice. The average hight is about 3 feet, and the stalks nearly ¼ inch in diameter. The leaves are 12 to 18 inches long, and many of them are 1¼ inches broad. The heads are enormous, ranging from 8 to 13 inches in length, and measuring 2½ to 3 inches in circumference. The yield of seed on an acre of such millet must be very large. We have received and tried many samples of millet seed from various parts of the country, but this excels them all. Will the unknown subscriber, who forwarded this, please send us his name, and inform us whether he can obtain a quantity of *pure* seed for us, to be placed in our free seed distribution for the coming Winter. Our own seed we shall sow next year, to multiply it for after distribution, as there is hardly enough to send out this year. We say "*pure* seed," for we notice some stray heads of a different and much smaller variety growing in our plot.

There is no doubt that several varieties of millet, and especially such a variety as the above, may be grown with great advantage by the farmers of this country. The seed is nutritious and valuable for feeding ground to stock, and unground to poultry. The yield per acre is larger than that of most other grains, while the stalks and leaves furnish a large amount of fodder. It does not require a strong soil, and the time of growth is so short that it is secure against the casualties of frost and drouth, and probably of insects. Several Western subscribers, especially among our German friends, who have sent specimens of millet, speak of this grain as a very good substitute for rice and other grain, as human food. Some assert that if rightly cooked, it is superior to rice.

The botanical name of millet is *Panicum*, of which there are many varieties. Several of these grow wild in this country, but the cultivated kinds have been introduced from Europe. Two leading varieties are the "Club Millet" (*Panicum Italicum* and *Germanicum*), and the "Panicled Millet" (*Panicum Miliaceum*); and sub-varieties of these are distinguished by the color of the seeds. Panicle millet has larger seeds, while the seeds of the Club variety do not fall out so readily when ripe. The "Stray Millet" is a Club variety, seeds white, and its long, heavy, curving heads, with the long broad leaves, render it quite ornamental in the garden, as well as useful in the field. The seeds are a good substitute for the bird seed of the seed stores.

Save the Corn Stalks.

An American farmer, traveling in Europe, is struck by nothing more than the carefulness with which everything is *saved*. Poor Richard must have got his proverb about the "penny saved," from across the sea. There, all corn stalks, every wisp of straw or hay that can be converted into fodder or manure, is assiduously gleaned up and put to some good account. Americans throw away; Europeans economize. If we wasted less annually, we could feed more stock, and so manure more land. Some time or other, perhaps we shall find this out.

Let us now consider economy as it relates to corn stalks. For horned cattle especially, this is first rate feed. Our horses will claim the best of hay, or cut straw, or both. Yet, if stalks are well cured, then cut fine and mixed with meal, they make a good relish for horses, a food on which they seldom suffer from heaves. Sheep will get along with oat and pea-straw, with a few turnips and a little grain sandwiched between. Cows and oxen will take kindly to stalks, and waste little, if properly managed.

The cutting and harvesting is a matter of considerable importance. Cut them as soon as the ears are well glazed, and before hard frosts have wilted and dried up the leaves like chips. After being cut and stooked, they may remain in the field until the corn can be husked. And when the husking is done, care should be taken not to scatter the stalks upon the ground.

On some dry day in the latter part of this month (October), let the stooks be carried to the side of the barn-yard, where, on a low platform of loose poles or rails a foot or so from the ground, they can be stacked. A strong pole is to be set up in the center of the staging. Around this, lay up the stack, alternating the butts and the tops, and leaving a small aperture around the pole for ventilation. If a layer of bright straw is put in the stack, once in two or three feet, it will help to prevent mustiness, and the straw, absorbing the flavor of the stalks, will be quite palatable to the stock. Nor will it be labor lost, if a peck or so of salt is scattered in each stack as it goes up. When raised to the proper hight, it is good economy to cover the stack with straw laid sloping so as to shed rain.

Now, does some tyro ask how to feed out stalks so as to avoid waste? We reply: no rack that we have ever seen, will prevent stalks from getting out and under the animal's feet. If they are fed in stanchions or stalls, it takes a great deal of time daily to clean out the refuse stalks. If they are fed out in scattered heaps around the barn yard, they will soon be trampled upon, and soiled, and when they have once been saturated with liquid manure, cattle will not touch them. We say, then, do not feed stalks in mild weather. Wait until the ground is frozen: the cattle will have keener appetites, and the ground

being hard and dry, the stalks will not get wet or soiled, and will be nibbled pretty close and clean. In thawing weather, feed out hay or straw in racks, where it will not be wasted.

A still closer economy will cut up the stalks fine with a straw cutter and feed them out with meal, steamed and mixed together. A small farmer may do this, and cut the stalks with his own hands. But he who keeps much stock, will have to use horse-power for cutting, otherwise his patience will soon give out.

Tim Bunker on Buying a Farm.

MR. EDITOR :—Deacon Smith has just been in to talk over the matter of buying a farm for his son David. You see, I have lots of neighbors that come to me regularly for advice, since I took to writing for the papers. I expect I have about as much business of this kind on my hands as if I had advertised, "TIMOTHY BUNKER, ESQ., CONSULTING AGRICULTURIST." How that card would look in the papers! If a neighbor wants to buy a horse, I am expected to tell him whether he is sound, just as if I could read his in'ards like a book. If another wants to sow wheat, he seems to think it won't grow, until I have told what lot to sow it on. I declare I believe some of them think water wont run in a tile, unless I have squinted along the bore and told them just how much fall they must have to the 100 feet.

You see, the farming business has not caved in yet, notwithstanding the hard times. A good many of the factories have stopped, and some mechanics that have been doing pretty well, are now idle. Nobody now wants to buy a fine carriage, or to build a splendid house. People who have money do not like to spend it for articles of luxury, and people who have got their living by making these things, have been thrown out of employment. But the oldest of all employments is yet a thriving business, though the profits are not quite equal to what they have been. We must have breastworks for the war, and when the war is over, there will still be a demand for the fortifications *inside*. We buy and sell farms out here, and expect to for some time to come. I rather think farming will be the best business going for some years ahead. As a people, we have been living altogether too fast, for the last twenty years. The change in the style of living would make the bones of our fathers rattle in their graves. We have got to come back to a more simple mode of life, and spend less on our stomachs, and a good deal less on our backs, especially our women. Only to think of a thousand dollar shawl on one woman —a whole farm with its fifty acres of soil on the shoulders of one individual? They do say the like of it might be seen in your City less than a year ago. I rather guess some of them fast men with their fast women are wishing they had some of their scattered coin back again in their tills. Why, my mother, bless her memory, never spent a thousand dollars for dress in her whole life, and she lived to be eighty. Now there is reason in all things, as she used to say, and we have got to be a good deal more reasonable in our family expenses, or slump through. This war will bring all our people to their bearings, and make us spend our money for something worth having—for a principle, and not for pudding and pomatum. There will be some satisfaction in knowing that we have maintained the liberties and the blessed institutions handed down from our fathers, at any cost. I have given my boy to this cause, and if I have to give my farm, I think I shall grow rich by the operation. What is property worth to Tim Bunker when his country is lost? I have thought a good deal about this war, especially since John enlisted, and I have made up my mind that it will have a great many advantages as well as evils. It will stop this fast living and extravagance, and bring back a great many to the simple habits, and sterling virtues of our fathers. It is better to make sacrifices for a noble cause, than to make money.

A good many, like Deacon Smith's son David, are beginning to see a comfortable, honest, happy life on a farm, who would otherwise have been tempted to try their fortunes in the City, and gone to ruin like the thousands before them. I have thought a good many would be looking toward the farm this Fall, and the substance of my talk with the Deacon, might be useful.

I lay it down as a principle, that a man ought to own at least half the capital he means to invest in farming. If a man has nothing but labor to dispose of, he should sell his labor to the best advantage, until he accumulates sufficient capital to set him up in business. Not one man in a hundred will succeed, who runs in debt for his farm and stock. There must be several hundred dollars of interest money to pay every year, and this will be a heavy load to carry, with all the other expenses. But if he have money enough to buy a hundred acres of land, he may safely run in debt for the tools and stock. We must have some floating capital always on hand, to take advantage of the times, and buy cheap when we can. If a man wants more stock, it is better to buy it when stock is low, than when it is very high. Some times a little extra manure will help out a crop wonderfully, and fifty dollars spent in guano, or bone dust, will bring back a hundred in less than six months. It is very important to have the fifty dollars where you can lay your hand on it.

Then a man ought to consider his own habits and tastes, in the location of his farm. This is especially important to men who have lived in the City, and enjoyed its advantages. Society is much more a necessity to them than to a man who has always lived in the country. He will feel uneasy without the daily mail, and a little of the stir to which he has been accustomed. He should by all means locate near a village, or on the line of some railroad. The farm, good as it is, will not be a substitute for every thing he has been accustomed to. And if a man have been bred to this business, he should consider what particular department of husbandry he likes best. A man bred to the routine of a grain farm, would probably do better with this, than with a stock farm. It is less important that a grain farm should be near a village, or City, than a farm where a mixed husbandry prevails, and where a near market is essential. A man with a genius for trade, should locate near a good market, and raise every thing that sells well, both animal and vegetable products.

If one has a fancy for stock, cheap land and a wide range of pasturage are essential to success. A valuable horse or yoke of cattle may as well be marketed a hundred miles off, as sold upon the farm. Most of the horses and beef cattle sold in your city are raised from a thousand to fifteen hundred miles away. Land worth a hundred dollars and upward an acre, as many of the farms are near cities, can not be devoted profitably to pastures. They are worth more for something else.

It is always well to remember, in making a purchase of so much importance, that farms, as well as men, have a good or bad reputation, that is generally deserved. Some farms are so fertile, so well proportioned, or so convenient to market, that they have always kept their owners in thriving circumstances. Trace their history clear back to the first settlement of the country, and you will find every owner what the world calls a lucky fellow. Other farms have the name of always keeping their owners poor. Sometimes they are in an unhealthy district, and much sickness has made large doctor's bills. Now unless you know just what the secret of an unlucky farm is, and can remedy it, avoid such a spot as you would the poor-house. You can not afford to try many experiments in a matter of so much importance. Is it a swamp that needs draining? You may safely venture, for there is wealth as well as health in knocking the bottom out of it. But as a rule, it is better to buy a farm that has a good reputation. If it has made others prosperous, with better husbandry it may make you rich.

Yours to command,

TIMOTHY BUNKER, ESQ.

Hookertown, Sept. 7th, 1861.

Pulverize the Soil.

Jethro Tull was not infallible, but he said many good and true things. Here is one of his paragraphs:

"The finer land is made by tillage, the richer will it become, and the more plants it will maintain. It has been observed that when part of a ground has been better tilled than the rest, and the whole ground constantly managed alike afterward, for six or seven years successively, this part that was but once better tilled, always produced a better crop than the rest, and the difference remained very visible every harvest."

Very well said, but must be taken with some abatement. What is true of one soil, is not of all. For instance: strong, clay land, rich in all the elements of vegetable growth, but which are locked up in compact masses of earth, will be greatly benefited by thorough pulverization. Begin in the Spring with a system of underdraining, to take off the surplus water beneath; follow up with a heavy plow and the harrow, keep the cultivator and the hoe bright all Summer, and the fertility of the land will be largely augmented. And this process may be continued for several years with like good results. Thorough tillage renders available certain unassimilated elements in the earth, and brings the soil into the most favorable state for absorbing valuable gases from the atmosphere.

But hardly the same results can be expected on light soils. They contain comparatively few of those elements of plant-structure which are found in rich clays, and they do not need pulverizing to render them pervious to light and air. Of course, if the basis of fertility is not there, no mere mechanical working can bring it in. Yet, by good tillage and rotation of crops, the frequent turning under of clover, and returning to the land all the manure made on the farm, any soil can be made productive.

A Good Law Disregarded.

It is a law of New-York State, that the Overseers of the Highway, in each town, shall "cause the noxious weeds on each side of the highway within their respective districts, to be cut down or destroyed, twice in each year, once before the first day of July, and again before the first day of September; and the requisite labor shall be considered highway work."

And this law has a penalty, too. Neglect of

the duty, is to be fined ten dollars, and any body is authorized to enter complaint to the Overseers, who are required by law to prosecute the delinquents. It is not easy to overrate the importance of this law to every agricultural community. And yet, how few pay any regard to it!

The Great End in Farming.

It is not the great end, to see how much hard work can be done, nor how much money can be earned in a given time. The aim should be, not only to better one's condition, but to improve one's self and his family, and to make himself useful, virtuous and happy. Which is first, THE MAN or his farm? The farm was made first, no doubt, so far as the earth and water and wood, are concerned; but in importance, the man stands first, and high above all, and he should always keep himself so.

It is folly to make one's self a slave to his land; bending his back, year in and out, in the hardest drudgery, regardless of his own improvement, and of his high relations to society and to God. Whenever a farmer, (and we might as well say, mechanic, merchant, or professional man,) finds himself a slave to his work, wearing himself out prematurely in the mad pursuit of money, he had better pause and ask himself a few sober questions: What's the use of all this work and worry? What is it going to amount to in the end? Am I true to the dignity of my own nature, to my family, to my Maker? Am I preparing myself for a serene and healthy old age? Am I not cutting short my days?

A little self-catechising of this sort is needful, especially in the hurry of haying and harvest-time; but it will not come amiss at any season. Let this instruction be given and received, line upon line, here a little and there a little.

Cleaning a Miller's Bolt—Another Method.

To the Editor of the American Agriculturist.

Five years ago I cleaned a miller's bolt that was pasted with flour, by applying alcohol with a brush, and then rubbing the bolting cloth with dry woolen cloths. I could not discover that the bolt was injured by the process.

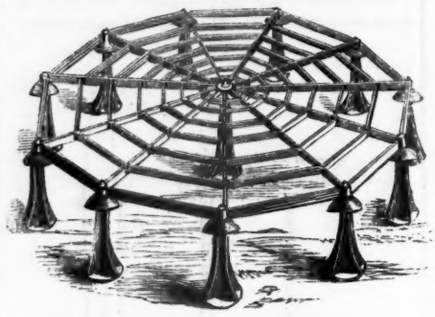
The best thing that I have used to clean the bolt from beards, that will work in and hang in the cloth, is to tack a piece of common cotton sheeting over the reel so that it will drag on the bolting cloth. It should be of the same length with the reel. I have used it for four or five years. It is not necessary that it should drag on the reel all the time; it should be tacked on so that it will hang down by the side of the reel when not wanted. Whenever it is needed, it can be thrown over the reel without stopping the mill, or the reel when in motion. It is much better than spending a day occasionally with a razor in shaving the beards from the bolt cloth, which is also liable to cut the cloth. My bolt cloth has not been pasted with particles of flour since I have used the cotton cloth over the reel.

H. N. WEED.

Oswego Co., N. Y.

A Cheap and Durable Bar Post.

On almost every farm may be found a collection of old horse shoes, which can be turned to good account in making bar-posts. Select two middling sized sticks having a straight edge, (two heavy joists answer well,) lay them side by side and nail on the horse-shoes so as to form the supports for the bars, and the work is done. In most cases it will be necessary to heat the horse-shoes and with a punch enlarge the nail holes sufficiently to receive the fence nails, which should be stronger and larger than horse-nails.



Improved Bottom for Stacks.

Stacking hay or grain is poor economy at best. Enough fodder is annually wasted by exposure in this way to pay a very handsome interest on the cost of buildings. Yet stacking must often be resorted to, as in newly cultivated regions before time or means have permitted the erection of barns or sheds, and also when an extraordinary yield more than fills the buildings which are ordinarily sufficient. As stacks are too often built, there is much unnecessary waste. A few rails laid upon the ground are not sufficient to keep the hay above from spoiling, and the bottom layer to the thickness of two feet or more is often spoiled for feeding, by absorbing water from below. The bottom of the stack also affords a fine shelter for rats and mice who usually take up their winter quarters there with impunity. The illustration above, which we have reengraved from an English paper, represents an arrangement for remedying these evils. Cast iron supports, having broad bases, and circular caps, are placed in a circular form, and ribs which may either be of iron or wood are laid in notches left for their reception. Cross pieces may either be laid upon these, or morticed or pinned to them, forming a substantial support for the stack, raising it out of the reach of wet and vermin. We are not aware of their use in this country, but the iron stands could easily be made at any foundry, at no great cost, and they would last for generations. They are portable, and thus readily carried where wanted. Wooden blocks, with tin rims or caps, would answer a similar purpose.

Keep the Farm Stock Thriving.

The change from a diet of roast beef and mutton chops with plenty of vegetables, to salt pork and hard crackers, such as was experienced and complained of by many volunteers in the war, is hardly less great than that to which animals in northern latitudes are annually subjected. In a few weeks the fresh, juicy herbage so greatful to bovine palates, will have felt the frost's sharp breath, and become withered and tasteless. Long before the cattle and sheep will cease to graze, if kept confined to the pasture, their food will be diminished in nutritive value. Just at this point in the year, without proper care, stock will receive a severe check in their growth. There is danger, in the first place, that commencing to feed with an allowance from the winter stores may be delayed too long. The object in feeding should be not merely to keep animals alive, but to keep them gaining in weight, and to do this, as the quality of food gathered in the pasture decreases in value, amends must but be made from other sources. The value of root crops will now be appreciated. First, there will be a large quantity of the tops, which are highly relished by stock, ready to feed just when most needed. When these are exhausted, the roots themselves will be taken greedily along with the forkful of hay which the provident farmer will allow to cattle night and morning, as the grass begins to fail.

If there be no roots raised, then supply the deficiency with a little corn or oats. The grain in this case will not be wasted, it will be found again in beef, mutton, or wool, and thus will only be taking a little longer route to market, while it will pay the farmer heavy toll by greatly increasing the value of the manure made. In this way the change from summer to winter feeding may be made so gradual, that the animals, with their appetites stimulated by the increasing sharpness of the weather, will scarcely feel it; and by keeping up a variety of food, alternating with hay, cut straw, stalks, roots and grain, they may be kept in full vigor and growing during the whole Winter, and start off vigorously in Spring.

How to Choose a Horse.

To become a good judge of horse flesh requires years of observation and practical acquaintance with the animal. No mere descriptions are sufficient to qualify a man to go into the market to purchase a horse with safety, for in no other article is there so much deception practiced. The following directions from the Ohio Cultivator are valuable as suggestions indicating the principal points to be studied:

First, notice the eyes, which should be well examined. Clearness of the eye is a sure indication of goodness; but this is not all—the eyelids, eyebrows, and all other appendages must be also considered, for many horses, whose eyes appear clear and brilliant, go blind at an early age; therefore be careful to observe whether the part between the eyelids and eyebrows are swollen, for this indicates that the eye will not last. When the eyes are remarkably flat, sunk within their orbits, it is a bad sign. The iris or circle that surrounds the sight of the eye, should be distinct, and of a pale, variegated, cinnamon color, for this is a sure sign of a good eye. The eyes of a horse are never too large.

The head should be of good size, broad between the eyes, large nostrils, red within, for large nostrils betoken good wind.

The feet and legs should be regarded, for a horse with bad feet is like a house with a weak foundation, and will do little service. The feet should be of a middle size and smooth; the heels should be firm, and not spongy and rotten.

The limbs should be free from blemishes of all kinds, the knees straight, the back sinews strong and well braced; the pastern joints should be clean and clear of swellings of all kinds, and come near the ground, for such never have the ring-bone. Fleshy legged horses are generally subject to the "grease" and other infirmities of that kind, and therefore should not be chosen.

The body should be of good size, the back straight or nearly so, and have only a small sinking below the withers; the barrel round, and the ribs come close to the hip joints. Shoulders should run back but not too heavy, for a horse with heavy shoulders seldom moves well; chest and arms large.

A horse weighing from 1,300 to 1,400 is large enough for a cart horse; from 1,100 to 1,200 is large enough for a farmer's horse; from 1,000 to 1,100 is heavy enough for a carriage horse.

For the American Agriculturist.

Chester County Swine.

The points by which a genuine Chester County pig may be known, are well established. They are briefly as follows: *Head*—Short and broad. *Face*—Somewhat dished; wide between the eyes and jowl. *Ears*—Fine and thin, standing out from the head, and the point drooping a little forward. *Neck*—Short and thick, well set on the shoulders, which are prominent and full. *Sides*—Carry their full width back to the hams, and *rounded*; never slab-sided. *Hams*—Rounded, swelling out behind and at sides, and presenting a full round appearance at all points. *Back*—Straight and broad. *Color*—Clear white; when well washed frequently presents a silky appearance. The least black spot or approach to a sandy color indicates a grade animal. *Hair*—Soft, thin in the back and belly, more thickly set on the sides and frequently a little waved. *Bones.*—Small and fine. *Tail.*—Fine, tapering and curled. So much for "points."

What the Chesters will do :—At 8 weeks old a well cared for animal will measure about 30 inches in length, and weigh 50 lbs. It will continue to gain on an average, 1 lb. per day until 2 years old, and when forced by high feeding, has frequently reached 1000 lbs. weight at that age. So remarkable is the aptitude to fatten, that at any age, or any season of the year while running to pasture, or with no food but the ordinary "slops" of the kitchen or dairy, it will keep in very fine order for the butcher. And with this disposition to fatten without being fed on grain, it is claimed for the Chesters that they will make more pork at a less cost than any other breed on this side of the Atlantic, at least.

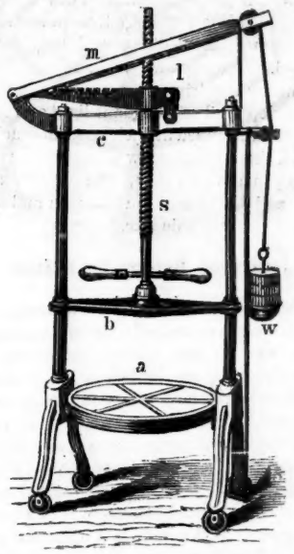
A Chester County, (Pa.,) Farmer.

Commence to Fatten the Poultry.

In a few weeks the stalls of the City markets will be decorated with the annual show of poultry. Festoons of chickens interspersed with ducks, and flanked by piles of plump geese and portly turkeys, will invite purchasers to enrich their tables with dainty viands.

Their good condition, and the prices they will bring, will depend very much upon the treatment they are *now* receiving. Fowls which are permitted to run at large until perhaps within a fortnight of Thanksgiving, and then are hastily stuffed with raw grain, will make a poor show beside the well rounded forms of the farm yard pets which have been kept fat throughout the season, and which only needed a little finishing off to prepare them for market. The business of fattening poultry for the Fall market should commence now. It can be done better and more cheaply than later. Fowls fed on boiled potatoes mixed with meal will thrive finely. It will take a little longer to fatten them in this way, but the feed will cost less. Cook the meal with the potatoes, and mix the whole well together. Moistening well with sour milk will be an addition. It will pay to cook grain of any kind for fattening poultry. Allow them to run in the yard until within two weeks of the time of killing, and supply them with gravel and ashes, and with plenty of pure water. Young fowls should be generously fed, not only to fatten them, but to fully bring out the second growth of feathers, or the flavor of the flesh will be very inferior.

The kind of food used, has much to do with the flavor of meat. Ducks which are reared in filthy places, are far less palatable than when kept in clean quarters and fed with grain and other wholesome food. Many prefer the flesh of geese because of their cleanly habits in feeding. A little attention to these matters now, and proper care in dressing and marketing the year's poultry, will make no little difference in their reception in the City, and in cash returns.



A Simple Press, for Cheese, etc.

We frequently find in the foreign journals, advertisements of implements which are unknown in this country. Some of them are worthy of being introduced, but this is not done, partly because the foreign inventors do not sufficiently appreciate the importance of our market, to pay for securing American Patents, and partly because no one here has had the enterprise to hunt up such implements and manufacture them. We have occasionally introduced articles of the class referred to, and shall continue the practice——The accompanying illustration we engrave from a cut advertised as a "Cheese-Press, No. 5," by James Mellard, of Rugeley, Staffordshire, England. No description is given, but the diagram shows at a glance the construction, and the working of what seems to be a very simple and effective press to be used for cheese, fruits, etc. Two iron rods stand on branching feet, which are fitted with castors or rollers to make the apparatus portable. The bed-plate, *a*, supports the material to be pressed; and the movable cross-bar, *b*, is brought down upon it with considerable force by the screw, *s*, which appears to pass freely through the top cross-piece, *c*, and to work in a *nut* in the lever *l*, while it again passes freely through a morticed opening in the upper lever, *m*. It will be seen, then, that any desired amount of pressure may first be given with the screw by means of its lever handles, and then the pressure is followed down by means of the weights, *w*, acting upon the compound levers, *m*, and *l*. The upper lever, *m*, appears to be attached to the lower one, *l*, by means of a catch and successive notches. To save the frequent adjustments required by this arrangement, it would seem to be preferable to let the end of *l* play in a groove along the under side of *m*, in which case it would always be in place. We see no apparent use for the rod at the right, except as a guide to the weight, which would seem to be unnecessary. The above apparatus, if of iron, may be made quite light, and be taken to pieces readily and packed in small compass for transportation. As there is probably no patent on these presses in this country, they can be made by any manufacturers.

For the American Agriculturist.

Wintering Bees in the Cellar.

Last Winter, I had eight swarms of bees, three of which were weak "second swarms." At the commencement of cold weather I took the three swarms into the cellar, and set them on a scaffold, hung from the ceiling. I had heard of keeping bees in the cellar, so concluded to try it, as I knew these would perish if left out. They were kept in the cellar until the maple blossoms had opened in the Spring, when they were placed on their old stands, from which they were taken in the Fall. I do not think there was a handful of dead bees altogether. The five left out doors were stronger swarms, though I found in the Spring they had consumed most of the honey, and a good many of the bees were dead. The swarms that were in the cellar proved to be the best in the collection; they grew stronger rapidly, swarmed earlier, and produced most honey. The cellar should be a dry one, and perfectly dark. Jabez.

For the American Agriculturist.

Interesting Experiments with Bees.

About the middle of June of the present year, I observed a little cluster of bees upon the front of one of the hives, which appeared to be in confusion; on nearer inspection I saw a young queen in the midst, which explained the unusual anxiety they appeared to manifest.

I conjectured that she had escaped to the outside of the hive, after issuing from her cell, to avoid being massacred by the old queen, who, for some cause, had refused to vacate the hive by leading out a swarm; and had thus compelled her royal daughter to suffer as a usurper, or fly for her life. Being somewhat anxious for a swarm, and none having yet issued, I thought here was a chance; so I took the matter into my own hands. There was a box with glass sides partially filled with comb and honey, upon this hive. I caught the young queen and confined her under a tumbler, then took off the box from the top of the hive, with all the bees that were in it, and then let the young queen enter through a hole in the bottom, and at once placed this box upon the top of an empty hive. I next removed the old hive about twenty feet distant, and placed the one with the young queen upon the stand where the old one had stood, until the new hive contained enough as I judged for a good sized swarm, when I returned the old hive to a stand about two feet distant from where it had formerly stood.

In the course of a few hours they all settled down into quiet every day life; and I congratulated myself with the thought, that by a sort of *snap judgment*, I had succeeded in preserving an artificial swarm. This would doubtless have been the case but for a sad accident which soon befell the young queen, Three or four days subsequently I saw what I supposed to be another queen on the outside of an adjoining hive, pursued by a score or two of workers which appeared to have designs upon her life. I at once rescued her, and proceeded as before with the intent of making another artificial swarm. But when I put her in the box, they seized her, and had she not made a precipitate retreat, would have dispatched her at once. She fell to the

ground and appeared to be in the agonies of death, but after a time partially revived, but one side seemed to be wholly paralyzed. While I was considering my failure and commiserating the fate of the queen, I observed my first artificial swarm to be in a state of the utmost confusion, running in every direction upon the outside of their hive. Here is my explanation: their royal mistress had been out upon an excursion with the drones, and on returning missed the entrance of her own home, got upon the wrong hive and met the reception that the strangers thought was due to a rival of their own royal mistress.

I returned her to her own hive, they received her with every mark of gladness, but the next day I found her near the entrance, so crippled that she could not ascend the side of the hive; and I placed her among the bees in the box. She lingered a few days longer and one morning I found her dead before the entrance, and the bees all in confusion, as is usual whenever they loose their queen. On examination, no eggs or young bees were found in the combs, and I concluded my swarm was destined to a failure, unless I could procure them another queen. So on the first day of July I took a queen cell from a neighboring hive, that had just swarmed, and put it next the glass on the edge of the sheet of comb, just pressing the edge of the comb around the rough edges of the cell, so as to hold it to its place. The bees at once appeared to comprehend their acquisition, and paid the most assiduous attention to the cell. I examined it two or three times daily; and on the morning of the seventh day of July, on lifting the cover I saw the mouth of the cell open; and on looking on the upper edge of the comb there stood her royal highness surrounded by several of her subjects, which from time to time extended their tongues and gently passed them over various parts of her body. For several days she appeared to make her headquarters near her cell where she had issued, as I saw her constantly on the same piece of comb. On the 15th of the month I saw the before-mentioned cells in several places containing eggs. On the 18th young larvæ were distinctly visible. These cells were some of them sealed over on the twenty-third. And now, August 2nd, the young bees are issuing quite speedily. I also saw several issue yesterday.

By the foregoing observations I think several facts are established:

First:—Artificial swarms may be made, with entire success if taken in the proper season:

Second:—The queen begins to deposit her eggs several days sooner than most authors have asserted. Issuing from her cell on the 7th she began to lay eggs on the 15th at the latest—only eight days from her issue. Ten days has been the time generally allowed her. I think in this case it was but seven days; as I saw eggs quite plentifully early in the morning of the 15th.

Third.—The bee is matured much sooner than supposed by many: Eggs deposited on the 15th developed into the perfect bees by the 2nd day of August—giving but the interval of eighteen days at most. A high temperature may have produced the difference; but it would seem that this will hardly account for it.

Mr. Quinby says, "she will begin to deposit eggs in about ten days, possibly a little less;" this would have brought the time up to the 17th. Then allow twenty days—the shortest time he gives—for maturing, and it would be the 6th of August, lengthening the term by just one fourth.

Jefferson Co., Iowa. E. L. BRIGGS.

Chapter on Hedges.

In answer to many inquiries we give herewith in as condensed a form as the subject admits, the main points needing attention in successful hedge-growing, with illustrations.

In the first place, much care should be given to the cleaning and preparation of the soil along the proposed line. If large trees or shrubs grow in the immediate neighborhood, they should be removed. Hedge-plants may, indeed, live and grow under the drip of trees; but as they are thereby deprived of abundant light and dew and rain, and are robbed at their roots of much needful food, they cannot grow as vigorously as those in the open air. If, then, one desires a good hedge, and one of uniform strength and beauty throughout the whole line, he must get rid of surrounding trees and bushes.

Then, the ground must be cultivated and enriched. Lay off a track, say five feet wide, plow or spade it, according to circumstances. Any part of the soil less fertile than the rest, should receive more manure. The ground should be brought into uniform richness, so that the plants will grow with uniform strength all along the hedge—a matter of great importance.

The next thing is buying and setting the plants. Buckthorn, Osage Orange, Privet and the like, can be bought at the leading nurseries, for from four to six dollars a thousand for yearling plants. If one is in no haste, and wishes to practice economy, let him raise his own plants from seed. When ready to plant, see that the ground is clean and in fine tilth, stretch a line along the middle of the border, and dig a trench about ten inches deep, and as many wide. Cut back the plants to two buds, and clip the ends of the coarsest roots. Set the plants eight or ten inches apart, and exactly on the line. Weak plants should be rejected, and only those of uniform strength set out.

If the hedge is to be made of evergreen plants, the same care should be used in preparing the soil, but with this difference, that no manure should be worked into it within six months of planting time. Set them carefully on a line, and at such distance apart that the ends of the branches will just touch each other. In a few years, they will interlock. Cut in the tops and the side branches, and mulch the roots with leaves, laying on a few stones.

Both deciduous and evergreen hedges should have the ground kept clear of weeds the first Summer, and in the Fall, or in the following Spring, the soil should have a dressing of manure. For evergreens, the manure may well consist of leached ashes, chip-dirt, or rotten leaves, though old barn manure is often used with advantage.

The Second Year.—If any plants (we now refer to deciduous plants) failed to grow, last season, or started quite feebly, they should now be replaced. At this time, also, go over the entire row, and trim down to about four inches of the ground. Give the border a good cleaning, and work in the old manure.

Fig. 1.

Throughout the Summer, keep down all weeds. If the plants make a very rampant growth, they may have a second pruning in August, but this we do not recommend. In Autumn, it is well to apply a little manure.

The Third Year.—In the Spring, before the buds start, give the annual pruning, cutting back half the previous year's growth. Cut most severely at the top, and bear lightly on the lower shoots. The hedge is now, we will suppose, a foot or eighteen inches high. This is slow progress, some will think, but it is rapid enough. The most important part of our work is done, for we have got a good base to our pyramid, broad and strong. The roots are strong and the branches are filled with stout buds, and a multitude of them. These buds will break vigorously on every side, during the Summer, and make a growth of at least two feet. Keep the ground well hoed during the season. For an evergreen hedge, the pruning will be less severe.

Fig. 2.

The Fourth Year.—Proceed with the usual Spring shearing, taking off about half of the last year's growth. Be sure to leave the bottom branches a little longer than the top, aiming always to keep the hedge in the general shape of a tall bee-hive, fig. 1. The practice of some, to train their hedges into the shape of a box, flat-topped and square-sided, (fig. 2,) and of others to cut them to a sharp peak and with a broad shoulder, (fig. 3,) is very objectionable. These forms are stiff and unnatural, and hard to preserve from year to year. After the fourth season, the hedge may be sheared twice a year, say in June and September, allowing it to gain eight inches or a foot, annually, until it has reached the desired hight and size. As a general rule, five feet is a good hight, though for a garden enclosure to break off cold winds, six feet would be better. After the hedge has reached its destined elevation, it must be sheared often, and not allowed to gain more than an inch annually. And once in four or five years, it must be cut back to the original point of five or six feet. In a locality suited to its growth, a hedge so planted and trained, will make a living wall of verdure, from the ground to the top, unbroken, symmetrical, and every way satisfactory. Unlike our common wood fences, it will not rot, nor be thrown over by the wind, nor heaved out by frost: it will need no painting or mending. Give it an annual shearing, and it will last a long life-time.

Fig. 3.

The Best Hedge Plants.

The great difficulty with us heretofore, has been, to get a suitable hedge plant. The hawthorn, so famous in England, does not answer as well in our arid and cold climate. We have several other plants that make a fine ornamental screen, but not more than one or two that will make a hedge strong enough and thorny enough to repel vicious cattle, including the two-legged sort. Yet it deserves mention, that some of these thornless plants, if well cut back at the start, and made dense and stiff from the ground, and carried up to five or six feet in hight, will sometimes answer for protecting hedges. For if cattle can not *see* through a hedge, they will seldom try to *break* through it.

THE PRIVET. (*Ligustrum vulgare*.)—This is a beautiful shrub, and thickens up well when trained for a hedge. It is easily propagated from cuttings, grows fast, the foliage is a lively green, showered over in spring with an abundance of small white flowers, and it holds its leaves until about mid-winter. It has no thorns. North of

this City, it is liable to be winter-killed. For an inside screen or division line, it is good.

The Buckthorn, (*Rhamnus cathartica,*) wants only a supply of stronger thorns to put it at the head of the list among hedge plants. It is a native American, being found wild in the latitude of Albany. Experience finds it to be hardy as an oak through all our northern climates; it is not particular about the kind of soil, is subject to no diseases, is not infested by insects, and cattle seldom browse it, as the foliage has a very bitter juice which is exceedingly distasteful to them. In good land, it makes shoots four feet long in a season, yet it yields well to the pruning knife, and becomes very thick and stiff. It has no thorns until it is three or four years old and has been well sheared. We daily see hedges of this, which were all cut back for the first two or three years, and then steadily carried up, perfect walls of verdure, four feet thick and six feet high, quite stiff and thorny, and so dense that nothing can be seen through them. A bullock would doubtless push through them if he tried. Where this plant is used as a street fence, it is a wise precaution against the attacks of horned cattle, to run a light railing in front of it, say three feet high, and with a single narrow board from post to post. Paint the posts and boards green, and it becomes almost invisible.

The Osage Orange, (*Maclura aurantiaca,*) is strong and thorny enough for any body. It has been widely planted at the West, and is very useful on the prairies where fencing timber is scarce. It does not suffer from the borer, or mildew, or any disease that we know of: its armory of thorns is absolutely terrific; and when it is well pruned from the beginning, it makes a handsome hedge, and one that is proof against inroads of thieving boys, pigs and poultry, and all sorts of trespassers. Yet, we regret to say, no Western traveler can fail to observe that full half the Osage Orange hedges there are failures. The plants grow very rampant, and, if not headed back vigorously at the start, soon get beyond all control; and of course, if the hedge is not started right, it can never be made right afterward. Farmers, with large grain fields to look after, are very apt to neglect their hedges. Then, too, this plant is a gross feeder, and exhausts the land for several feet on each side. The leaves expand late in Spring and drop early in the Fall, but during their expansion are exceedingly beautiful. North of latitude 40°, it is too tender for a permanent hedge. Throughout the middle States, the tips of last year's growth are often killed back a foot or so by the Winter; but this saves just so much pruning.

The Honey Locust (*Gleditschia triacanthos*).—Here, also, are thorns enough, and hardiness enough for any climate south of Quebec. Some object to it because it grows so lustily, and needs so much shearing; but this is not a valid objection; two annual clippings keep it in subjection. It may be a little coarse for a hedge in front of a nice lawn and residence, but as a farm hedge in all the northern States, we know not its superior. To propagate it, sow the seeds on the line of the proposed fence, or set out yearling plants, about six inches apart. Head it back once a year, in Spring, for the first three years: afterwards, prune twice a year, in June and September.

Other deciduous plants are used for hedge-making, which sometimes answer tolerably well. The old English Hawthorn sometimes succeeds for several years—we have seen it thriving in some places for ten or twelve years—but it is not suited to our climate. The borer infests it often, killing out the plants in patches, and mildew blights the foliage. The Beech, Lilac, Hornbeam, Berberry, Willow, Upright Honeysuckle, Euonymus, Althea, and others, answer for inside divisions, but not for hedges proper.

Evergreen Hedges have also their claims. They give character to one's grounds, and mark the outlines and divisions in a visible manner all the year. They shield one's garden and lawn from the cold winds of Winter and Spring. They do not have thorns, but if well pruned and then partially protected by a railing, or line or two of wire on the street side, they answer.

The Norway Spruce (*Abies excelsa*).—Take plants about four feet high, and well furnished to the ground, set them about five feet apart from center to center, cut out the leaders and shorten in the side branches a few inches, and a good hedge will be the sure consequence. Of course, they are to have good soil, and to be pruned every year afterward like other hedges.

The American Arbor Vitæ, (*Thuja Occidentalis*), erroneously called white cedar, makes an excellent hedge. It can be had at a cheaper rate than any other; the plants are sure to grow under any decent treatment, and are hardy in Winter. Its dingy brown hue in the frosty weather is an objection to it. In that good time coming, when the Siberian arbor vitæ shall be common and cheap, we shall have a much better plant than the native American.

The Hemlock (*Abies canadensis*).—We can never tire of singing its praises. For an ornamental hedge, nothing can equal it. A vivid green all the year; hardy far up into the Canadas; so dense, when pruned, that the smallest bird can not fly through it, nor see through it; growing, better than most plants, under the drip of other trees, and so manageable, that the pruning shears easily control it. Transplant on a showery day, the plants being two or three feet high; keep the roots from air and light, and mulch as soon as planted. There is some difficulty in moving young hemlocks, but not so much as many imagine.

The Junipers, especially the Red Cedar, also the Holly, Yew, and Tree Box, are sometimes used, but they either die out in spots, or become so lank at the bottom, or suffer so badly from Winter frosts that they seldom give much satisfaction. They may do well elsewhere, but can not be recommended for our climate.

Greenwood Cemetery.

If any of our readers visiting the City this Fall, have a part of a day to spare, we advise them to spend it in a jaunt to Greenwood Cemetery. Crossing the ferry to Brooklyn, the horse-cars take you within a few steps of the Cemetery gate, for five cents. If you are strong-footed and have plenty of time, you can traverse much of the ground on foot; otherwise, it would be better to take a carriage. (A carriage for four persons or less, can usually be engaged at the gate to go through the principal drives, spending an hour and a half, or so, for one dollar, if the time and price be agreed upon *before* starting.)

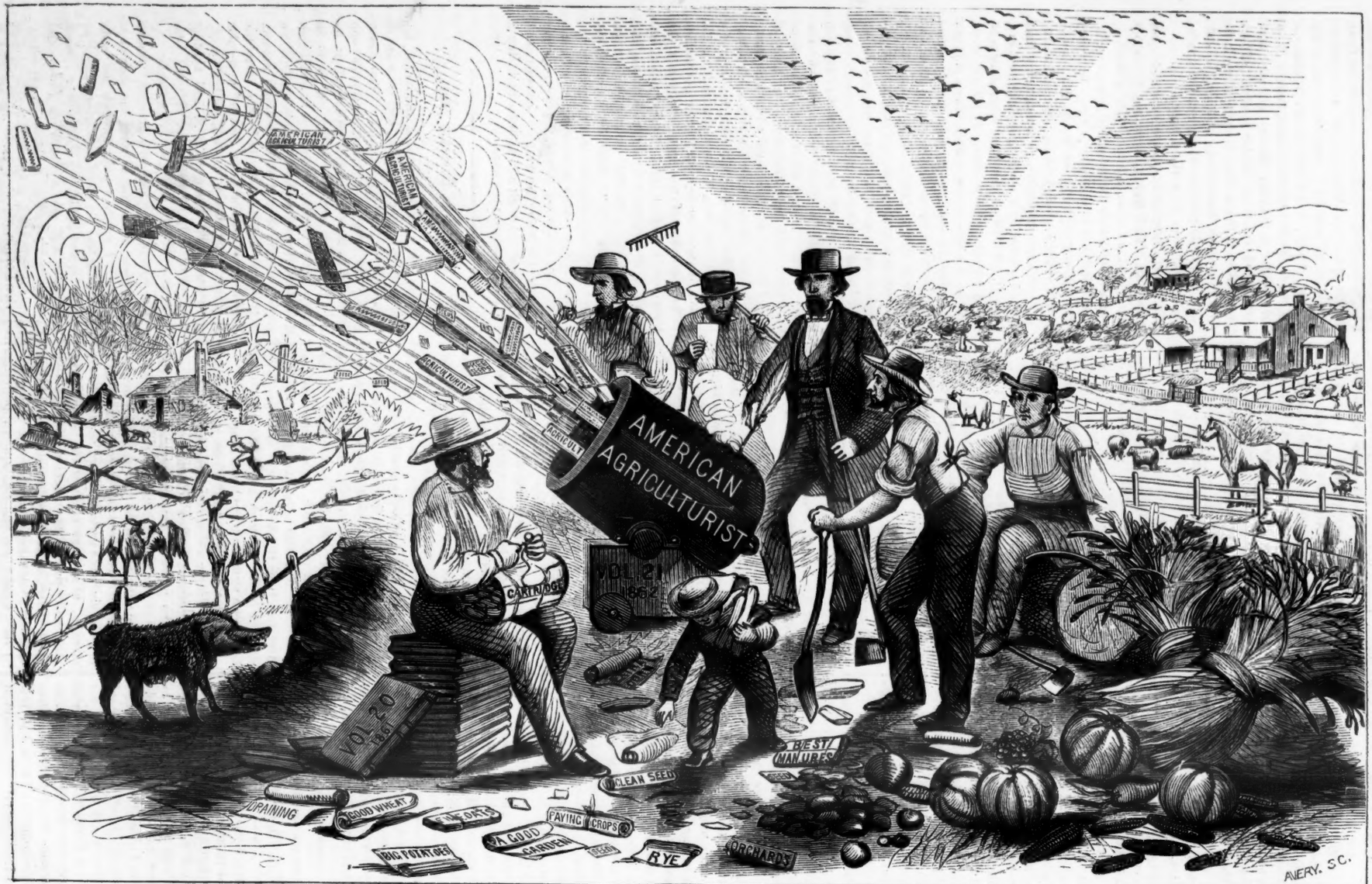
About three hundred and ninety acres, we believe, are now owned by the Company, and nearly every square rod is kept under careful cultivation. It is said to be the largest establishment of the kind in this country or in Europe. Many of the original forest trees and shrubs have been preserved, and others, both native and foreign, have been added. No visitor will fail to notice the beautiful weeping willows skirting the ponds and trailing their branches in the sparkling water. These ponds, or miniature lakes—styled also, on the map of the Cemetery, Sylvan, Arbor, Valley and Osier waters—are among the finest features of the grounds. They are not dull, stagnant pools, but are kept fresh and moving by streams of water pouring in and out of them. The water of Sylvan lake is forced into an elevated reservoir, from which it is conducted in pipes to different parts of the grounds for irrigation and for the supply of fountains. One or two large and deep wells also have been dug, from which powerful steam engines raise water at the rate of three hundred gallons per minute, to furnish constant streams running into the ponds, and so keep them in healthy circulation.

The roads and walks wind here and there in graceful curves, through all parts of the grounds. They are broad, well graded, and are kept in excellent order. The roads, exclusive of the paths, extend nearly twenty miles! They conduct the visitor to a great variety of views of the surrounding scenery—the Bay and Harbor of New-York with its forest of masts, its islands and forts, the shores of the Hudson and East rivers, New-Jersey, Staten Island, the Quarantine, together with a view of the Atlantic ocean from Sandy Hook to Rockaway.

Whoever is interested in the art of sculpture, will find much to engage his attention. Here, as elsewhere, he will see that show is often in inverse proportion to real merit. Three of the most pretentious monuments bear the names, respectively, of a female tobacconist, a world wide advertiser of sarsaparilla, and a prosperous stall-keeper in Washington market. The sea-captain's monument is another of the "lions" of the cemetery. This man, determined to have something original and striking, brought home, on one of his cruises, a massive block of Italian marble, and an Italian sculptor. He ordered the artist to "do" him of the size of life, copying his features exactly, and representing him standing and taking an observation of the sun with his quadrant. This work having been done to his liking, he bought a conspicuous lot in Greenwood, built a high pedestal in the center, and caused his marble self to be elevated upon it, as his monument. The old gentleman still survives, and takes much satisfaction in visiting the monument, and showing it to his friends. The story goes, also, that one day he went alone into the vault beneath the monument, and while there the door closed behind him, and, shutting with a spring, fastened him in. After spending about twenty four hours there, his cries caught the ear of some passer-by, and he was released!

But while there are a few things of this sort, calculated to excite mere curiosity, there is much beside, to awaken higher and better feelings. Here are noble monuments to firemen, to captains, pilots, and sailors, who sacrificed their lives in the endeavor to rescue others from death by flame and flood. Here are appropriate testimonials to eminent civilians and philanthropists. Here are humbler tributes of affection to the memory of the loved and lost, in thousands of families—humble, it may be, but often exceedingly touching and beautiful.

It is well worth one's while to turn aside occasionally, from the haunts of busy life, to visit these cities of the silent. They show him what civilization, refinement, and Christianity would do for man's last resting place. They sober our views of life, and at the same time cheer us by the respect paid to the good departed.


AMERICAN AGRICULTURIST
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Plant Small Trees.

Young America is in such haste to realize results, he can't wait for trees to grow in the natural way. He wants to transport huge sons of the forest into his new place by some sort of patent machinery, so as to make a grand show *immediately*. He has little idea of what constitutes a perfect vegetable structure, small or large; he knows little of the pleasure which comes from watching the steady development and growth of a small tree, from year to year. No, no, he wants to leap up to grand achievements at once; he wants a lot of big trees, and that's all, and that's enough for him.

We beg a little consideration for small trees. Go to the open field, or to the nursery, and select a good specimen of almost any good tree—say the beech, or maple, or tulip, or hemlock. Take one or more of each, three or four feet high, that have branches well formed on each side. Save all the roots and fibers in digging them up, and in carrying them home don't bang them to pieces, root and branch, but treat them with the utmost tenderness. Prepare large holes, in rich soil, and set them out so that they will grow vigorously. Clip the ends of the branches just a little, but do this so as to preserve the original symmetry.

Now, watch these trees, from year to year. How healthy they look, in every limb and twig and leaf! How happy they look, shooting out their branches on every side, and dancing in every breeze! How graceful in every part, and as a whole! Can anything more completely fill one's eye! Small as they are, they are perfect in form, and plainly predict what they will be when full grown. Age will only enlarge their bulk, and bring them nearer the time of their decay. Is not "sweet sixteen" more charming than the wrinkled and toothless octogenarian?

He who sets out large trees is compelled to top off at least the lower branches, to enable the top ones to live. The roots are so mutilated in digging them up, that nearly all the branches have to be trimmed up and shortened in, to restore the balance of things. But such a tree, so marred in root and branch, is only half a tree. It is a fragment, to which the lost parts can never be restored.—Begin, then, with small trees. How they enjoy life! They will ere long outstrip the large stumps you set out at the same time. Set them on your lawn and pleasure ground. Throw away your pruning saw, and let them work out their own ideal. If you interfere at all, let it be only with your thumb and finger. Never fear their wanton ways. They will attain near to perfection, if you will only "let well alone."

For the American Agriculturist.

The Best Elm—Desirable Trees.

I noticed an article in the June *Agriculturist*, in which you give the preference to the American Elm. You are perfectly right. But twenty-five year's experience with the Dutch Cork Bark Elm leads me to differ with your statement as to its being perfectly hardy or desirable in all respects. It is sometimes killed several feet from the end of the branches by the hard winters, and except in yards or places where suckers are not regarded, it is a great nuisance. If planted near the house, the roots will travel to a great distance, and rob the roots of every other fine tree or flowering bush chancing to grow near it. It is a beautiful tree, and fine grower, and probably a good tree for streets and sheltered situations. The English Cork Elm is liable to the same objections. The English field or broad-leaf Elm will not withstand the winters here, and like the foregoing, will throw off numberless shoots at the commencement of the dead branches, which quite disfigure it. The Scotch Elm is entirely hardy in this latitude, as far as I have observed, and has none of the objections incident to the others.

But why need we regret the loss of foreign varieties of Elm, when we have so many other beautiful varieties, perfectly hardy, that will never sucker. The Maples are the finest class of shade trees we have, from the most beautiful and compact growing Norway, to the erect and graceful silver-leaf and sugar Maples. They afford quite a contrast in their growth, and, if we include the ash-leaf variety, they would nearly supply the deciduous trees which a grove or lawn would require.

I would recommend, as a noble tree that always appears bright and clean, the Tulip tree or white wood. Also add the White Ash and Sweet Gum to the list usually selected. These trees are handsome through the season, do not sucker or throw off their leaves prematurely, and are very pretty in the Autumn. With us, the Horse-chestnut and Linden loose all their beauty the latter part of Summer, and are a disgrace rather than an ornament to the grounds after that. The European Larch is liable to the same objection, but it is such a beauty when it first leaves out, that we can hardly spare it from the collection, but it should not be planted very near the house, as the wind often blows the decaying leaves from the trees into the rooms, to the no small annoyance of the careful housekeeper. Weeping Willows should also be planted at a distance, for their leaves and fine twigs are dropping through the season, making much litter, and filling up the gutters, causing no little annoyance.

I. Hicks.

Queens Co., L. I.

For the American Agriculturist.

Hints on Tree Planting.

October is the great month for Fall planting. In the nurseries, in young orchards, in pleasure grounds, and by the road side, the spade is now busily at work, all over the country, setting out trees. We are glad to reflect that such is the fact. Let the good work go forward hopefully.

It is a subject of friendly dispute, whether Spring or Fall is the best season for this operation. Each season has its special advocates. To us, it seems plain that tender trees should be set out only in the Spring, while hardy sorts may be planted both in the Fall and Spring. If the soil where our trees are to be set out, is low or wet, the work should be postponed until Spring. And even then, that low, or wet soil should be drained, or else the trees might about as well be thrown at once on the brush heap.

This, too, should be said: if one is intending to plant a large and choice assortment of trees in the Spring, it is often advisable to purchase them the previous Autumn, because then the supply of fine, unculled stock at the nurseries is much greater than in the Spring. Open trenches about two feet deep and three feet wide, in a dry and sheltered part of the garden, and "heel them in" at an angle of about 45°, covering the roots and a part of the trunks thoroughly with earth. Here let the trees lie until Spring; they will suffer less than if planted out separately. Early in Spring, give them their final destination.

Evergreens should not be transplanted in the Fall, unless we may except a few of the hardiest, such as the Arbor Vitæ, and Norway Spruce; but even they would fare better if set out in the Spring. They can get little or no hold of the soil before the Winter sets in, and then, with all their weight of Summer foliage on, they have to stand the lashing of Winter storms. If they must be set out in the Fall, we advise that it be done as early as September; that they be well staked and tied up before windy weather sets in; and that the roots be well mulched.

But hardy, deciduous trees may well go out in the Fall. They have taken in sail, by casting their leaves, and if put out now, early in October, in good, warm soil, the roots will make considerable growth before Winter sets in. To repeat what we have before mentioned in this journal, we had occasion once to take up, just on the edge of Winter, several bushes of Lilac, Spirea and Syringa, which we had set out in Early October, and were surprised to see what a fine growth of young roots had been made in six or seven weeks. The soil at this season retains much of the Summer's heat, long after the air above ground has become cool, and so it favors the emission of fibrous roots.

Hence, again, we advise Fall planting. Apple orchards, and hardy pear trees may now be set out. Hardy shade trees, such as maples, elms, and ash, may now be put in honored situations in the public park, the lawn, and by the highway. Set about this work now. The leisure or inclination may not come amid the hurry of Spring work. At least, make a beginning now: do what you can, and leave the rest until Spring. Make a careful selection of your trees, dig ample holes, and provide good soil for bedding the roots. Reduce the top branches in proportion to the shortening of the roots, and cover the wounds with wax or other weather-proof material. Drive in stakes on the windy sides, and tie the trunks to them with flat, leather thongs, or with stout "listing" from the tailor shops. In our experience, this last article serves an excellent purpose. It does not bark the trees, and by the time it rots and breaks, the tree no longer needs it. Orchard trees may be fastened with straw bands. Anchor them, also, by laying a few flat stones over the roots.

To Revive Dormant Buds.

Every gardener knows that sometimes his fruit trees and grape-vines lose their branches at points where it is very desirable to have them grow. For instance, a young pear-tree has one or two of its lower branches broken off, on its way from the nursery. If the tree is to be grown in a pyramidal shape, it is essential that these lower branches should be replaced. When grape-vines are trained on the renewal method, it is quite important to have the branches ranged along the horizontal "arms" at regular distances. But often a cane will get broken off, or by unsuitable management it will become weak or be reduced to a mere dormant bud. What to do in such cases, is often a puzzle.

A writer in the "Farmer's Journal," thinks he has found out a way to meet the difficulty. He says: "I passed a knife through the bark, and a little into the wood, just over the eye or "knerl" where the branch should have pushed, or where it had pushed out when young, and had been rubbed off by accident. A careful examination will show plenty of dormant eyes or knerls....The sap has only to be arrested at

this point to bring these dormant eyes to life. In passing the knife into the wood over the eye, it should be passed partly around the tree so as to form a slit or gash over the eye from a half inch to an inch long, according to the size of the tree; and be sure that you pass it through the inner bark and into the wood....The result was very satisfactory."——*If* this practice will generally result satisfactorily, it will be of great value to the orchardist and vine-grower.

For the American Agriculturist.

Disease in Apple Trees.

BY A WESTERN NURSERYMAN.

I wish to contribute for the benefit of Western fruit growers, a few hints upon the cultivation of the apple tree, and especially with regard to a disease in the roots of the tree. The first symptoms are a check in the growth, and drying up of a few of the leaves about the fruit spurs. These are all that show themselves the first year. The next season the tree puts out its leaves fresh and fine, and, if large enough to bear, will blossom abundantly, and set a large crop of fruit. But the fruit will early show premature ripeness, and the leaves will begin to assume a pale, unhealthy looking color in June.

Now for the cause and remedy. Remove the earth from the collar of the tree so as to expose the main roots, when the bark, about three inches below the surface, will be found brown and spongy. Streaks of healthy bark will often be seen running down the roots, alternating with the unhealthy portions. To reinvigorate the tree, cut away any decayed portion of the roots, removing the dead bark from sound portions. Take half a pint of soft soap and pour it on and around the dead wood, and return the earth about the roots, and cut the branches of the tree back with an unsparing hand. The tree may not appear healthy until the next Spring, when it will usually come out all right, and the new bark and wood will begin to roll over the dead portions of the roots, or the wounds made in their removal. The healing process is the same as above ground, only more rapid at the root.

I find soap, both under and above ground, very beneficial to the apple, pear, plum, cherry, peach and quince. Rub the trunks once or twice a year with soap, or wash them with strong soap suds, using care not to get it upon the leaves, and the trees will be greatly benefited.

WM. M. JEFFREY.

Oak Hill Nurseries, Ill.

Borers Caught "Napping."

To the Editor of the American Agriculturist.

My apple trees were badly injured by the borer, and further damaged by using strong potash lye upon them. Last Spring I cut out what borers I could find, and encircled the trees loosely with roofing paper dipped in coal tar. Early in July I was surprised by seeing a small round hole through one of my protectors; but I concluded that the animal had escaped, and that it was a good riddance as I believed he would not return to so odorous a home.

About the 20th of August I removed the covering and examined my trees, when I found my enemy had built himself a snug nest *between the paper and the bark of the tree*, the material of the nest being firmly attached to each. From some single trees I took as many as *thirty* of these destroyers, which I dissected, or rather bi-sected with my pruning-knife. After this operation I poured on a very little spirit gas, and I believe I shall not soon be troubled again with borers. I found two of the same unwelcome visitors upon my standard pear trees set out last Spring.

Fairfield Co., Conn. C. W. BOND.

REMARKS.—Our correspondent does not describe the insect found in the nests alluded to. If really the borer, it must have been on its return from the tree in a winged state, and we are not aware that it ever constructs nests, as the female usually lays her eggs and then secretes herself in some position where she dies without undergoing any change. Again, there are seldom more than five or six worms in a single tree, even where badly infested, though Dr. Fitch speaks of a remarkable case in which twenty worms were found in one tree. It is probable that the hole through the paper was made by an escaping borer beetle, which would naturally continue gnawing until free, and that the nests or cocoons were made by worms or caterpillars of various kinds which had managed to crawl under the *loose* paper in order to secrete themselves while changing from the pupa to the perfect state, and most likely to spend the Winter in the secure quarters.—ED.]

Insects upon Evergreens.

It can not be denied that insects of one sort and another are beginning to invade our conifers. The Scotch Larch is suffering badly in some districts. The Balsam Fir has long been infested. On this tree we have occasionally found a green worm, which curls up and drops to the ground as soon as the branches are shaken. But the worst enemy of this old favorite tree is a very small insect which covers the twigs and leaves, causing the latter to roll up, and giving the whole tree a shabby look. Where one has a large number of these trees, especially if they are old specimens, it is useless to try to extirpate these insects. But on one or two trees, we should think an occasional shower bath of whale-oil soap might be serviceable.

There is another insect—distinct, we think, from either of the foregoing—called the Pine Weevil, which infests the Pine, the Spruce, and Balsam Fir, and probably other evergreens. The first sign of his presence on a tree, is the drooping of a limb, sometimes the leading shoot, and then its falling. If, on first observing the injury, we cut off the shoot below the break, we shall find a worm about an inch long, of the size of a large knitting needle, in the central portions of the shoot, where he has bored a home for himself.

If these several pests increase largely, it will be a sad thing to all lovers of conifers. It is said that a species of ichneumon fly often deposits its eggs in the larvæ of the pine weevil, and preys upon it. Good fly! welcome to our grounds, and multiply and increase your progeny. Mr. Harris, the great insect professor, suggests as a check upon the weevil, to stick newly cut branches of pine in the ground in the neighborhood of favorite trees, during the season when they lay their eggs (April and May?). Examine these branches often, when they will be found covered with insects which may be gathered on blankets and burned.

APHIDES ON THE ASTER.—A correspondent writes that the aphides have attacked the roots of his Asters, and are doing much injury. A Brooklyn gardener recommends to carefully lift the plants from the ground, breaking as few fibers as possible, wash the roots, and replace them. Though this seems hazardous, it may succeed if properly done, as the plants are hardy.

How to grow the Hyacinth.

It is unnecessary to make a labored plea for this old and well-known plant. It is able to speak for itself, and is a favorite with all who love gardens. It appears at a season when other flowers are comparatively scarce. It is easily managed, is beautiful and fragrant; and, rising up from the cold ground in early Spring, it seems like an old friend come to cheer us and to claim our sympathy in return.

Of Hyacinths, it is said that there are more than a thousand varieties cultivated in Holland; and the annual export of bulbs, (including tulips, etc.,) from that country to England, France and the United States, forms quite an important item of commerce. In selecting a lot for planting, it is advisable to get as great a variety of colors and shades as one's space will admit. One can have the patriotic colors of "red, white and blue," and every shade of them. He can also have white with red, blue, and yellow eyes, or with pink stripes, and green tips, etc. The double flowers are generally preferred, but the single often present the finest colors.

Hyacinths often fail to give perfect satisfaction, from two causes. First, they are planted in poor soil; and secondly, the tops are cut off as soon as the plants are done flowering. The latter is an injurious practice, because the bulbs need the leaves to store up food for next year's use. The foliage should be left untouched until it is ripe, which is indicated by its turning yellow; then it may be removed.

As to the soil, too much attention can hardly be given. Choose a good, sunny aspect, break it up two spades deep, carting off a part of the lower spit, if it is cold and stiff. The English formula for a hyacinth bed is as follows: "One third river or sea-sand; one third fresh, sound earth; one fourth rotten cow dung at least two years old; and the balance of decayed leaves or old peat." This is all very well, but it answers every ordinary purpose, if good garden soil is ameliorated by a dressing of old cow-dung, sand, and woods earth in equal quantities, mixed well together. Let the bed stand a week or ten days to settle. This work should be done the present month; if delayed until November, the growth of the bulbs and the flowering next year, will be quite feeble.

The bed being prepared, the next thing is to assort the colors so as to produce the best effect. This can easily be done. British florists have for years past, made this a matter of much study, and have fixed upon the following classification which proves to be generally satisfactory.

Dark Red	White	Light Red	Dark Blue	Light Red	White
Light Blue	Dark Red	White	Light Red	White	Dark Red
Yellow	Light Blue	Dark Red	White	Dark Red	Light Blue
Dark Blue	Yellow	Light Blue	Dark Red	Light Blue	Yellow
Light Red	Dark Blue	Yellow	Light Blue	Yellow	Dark Blue
White	Light Red	Dark Blue	Yellow	Dark Blue	Light Red

It will be found that the contrasts here are very good, whether the bed is viewed on one side or the other.

The bulbs being in hand, lay a straight edged board across the bed, and make drills by the side of it five inches deep. Set the bulbs six or eight inches apart. Put a small handful of sand at the point where each bulb is to stand, and bury the

bulb in it; then fill up with common soil. The top of each bulb should be about four inches below the surface of the bed.

In buying bulbs, take pains to select good sound roots—those which are hard, bright, without black spots, and whose buds have not started at all. Of the sorts which have an almost world-wide fame, and which can be got in almost every seed store, we give a few of our own favorite names:—*Waterloo*, double red. *Groot Voorst*, double, pale flesh color. *A la Mode*, double blue. *Nanette*, double white. *Grand Vainqueur*, single, white. *La bien Aimee*, double, dark blue. *Anna Maria*, double, white. *La Favorite*, double, yellow. *Bouquet*, double, orange. *Acengarius*, pale blue. *Acteur*, double, red.

As Winter approaches, cover the bed with an inch or two of strawy manure, which should be removed in the Spring, as soon as the hardest frosts are over.

And what we have said above, respecting the culture of the hyacinth, will apply in general to other Spring bulbs, including the Tulip, Narcissus, Crocus, Snow Drop, etc. It is best to plant the last two in September, though October will answer. They are less fastidious about soils than other bulbs, and should be planted only two inches deep. The tulip wants a deep, rich border, like the hyacinth, open to the sun, and with no standing water at the bottom of the bed. It wants a plenty of old hot-bed manure, mixed with leaf-mold and sand. If highly manured with half fermented dung, the colors will deteriorate and become "foul," as the florists style it.

A Hint for the Dahlia.

Seeing it suggested, last Summer, in the English "Cottage Gardener," that the bloom of dahlias could be improved and prolonged by mulching the roots with coarse litter dung, the writer tried the plan, and found it very successful. The mulch was applied in the latter part of Summer, just as the earliest buds were developing. The ground was first thoroughly hoed, to soften the surface. As the litter did not present a very neat appearance to the eye, we sprinkled over the top of it a little fresh-mown grass from the lawn. This mulch kept the ground from drying up, and when rain fell, it leached through the mulch, carrying down more or less liquid manure. But the rains not being always as abundant as we could desire, the soap suds from the weekly wash was applied, and with good effect.

The result of the whole was a fine bloom and a constant succession of flowers, unchecked by the prevailing drouth. The soap suds was also applied to the foliage, and served to check the ravages of insects. We advise young florists, who are apt to get discouraged with their dahlias, to make a note of this.

Over-Doing in Trenching.

Trenching is important in its place and time, if properly performed. But it is often over-done. Some persons, after reading such earnest appeals as the late Mr. Downing and others were wont to make on this subject, have been known to rush into their gardens and dig away violently, bringing up the bottom soil to the surface, and burying the top soil beneath it. This they thought the *summum bonum* of horticulture; this was thorough work, and all else was superficial play.

Where the top soil is worn out by long cropping and no manuring, this sort of trenching is all very well; it brings up virgin soil, and exposes it to the ameliorating influence of sun and air. It is a partial substitute for manuring the upper soil. But, in ordinary cases, such tillage is not to be commended. It buries soil which is light and porous, abounding in the food of plants, sinking it out of sight and below the reach of common plant-roots, and substituting in its place a mass of cold, comparatively barren earth, unfit for the germination of seeds and the healthy after-growth of vegetation. There are, indeed, some roots which strike deep into this lower soil; but they are sent down chiefly to anchor and brace the plant, and to bring up moisture to it in time of drouth. As some one has said, roots are "the hewers of wood and drawers of water" to the vegetable establishment. The feeding roots lie near the surface, and the real nourishment of the plant should be placed within their reach. When this cold soil is brought to the surface, it needs tilling and manuring for at least one year, to bring it into good order.

In place of the above, we recommend *deepening* the soil, not turning it upside down. If it is a large tract, run through it a heavy plow, then follow the same furrow with a subsoiler, to break up and loosen the bottom earth, but not to raise it to the surface. So, in the garden, throw off the top spit on one side of a proposed section, then with a long spade, break up another foot deep of earth, and return it to its place. If you have coarse manure to spare, mix in a little with this lower soil; it will help to keep it loose and porous, aside from the fertility. Now, throw back the top soil to its original place, and manure this to your liking. This is trenching to a moderate depth, to be sure, but it is of the right sort so far as it goes, and it is enough for all ordinary purposes. It is twice as deep as the mass of our tillage goes. Whatever is planted in ground so treated will prosper. The dark colored surface soil, rich in humus, is just what nature furnishes for her plants. If we go into the forests and uncultivated fields, we everywhere see that nature provides for her vegetable offspring by placing the food near the surface: she does not bury it. So we say, let trenching go on, but let it proceed with discretion, and not turn the world upside down, nor the soil upon its surface.

Weeds in Walks.

They will often grow there, however well the walk may have been made originally. A good preventive, in the original construction, is to take off the top soil, (in which the seeds and roots of weeds chiefly abound,) to the depth of six or eight inches, fill up the cavity with small stones or bricks, and then put on an inch or two of coal-ashes, finishing off with fine gravel. Here, as will be readily seen, is little food for vegetable growth. Yet, enough refuse matter will soon accumulate on the surface, to give weeds a foot-hold. And the best way to keep a walk clean, is to keep the hoe busy all through the season, extirpating every weed as soon as it appears. Where there is a great extent of walks, some persons use refuse salt, scattering it over the gravel, once a month. This answers for a time, but a smart rain or two converts salt into a manure, which gives the weeds a fresh start.

In some gardens, the following mixture is used with good effect: Ten gallons of water, twenty pounds of quick lime, two pounds of flower of sulphur, mixed and boiled in an iron vessel. After settling, draw off the clear part, and sprinkle it on the weeds through a common sprinkling-pot. As it is very caustic, it should not be thrown on the grass or box borders, for it will kill good and bad without distinction. It is claimed for this article, that where weeds have been once subdued by it, they will not appear again the same year. This may be true, but we would not throw away the hoe quite yet

SAVE THE BEST FLOWER SEEDS.—The same law holds good in cultivating flowers as in raising grain or other produce. Seeds from the most perfect specimens will be likely to give the finest blooms. In the season of flowering, the best single flowers should be marked, by tying a bit of ribbon to them, or in some other manner, and the seed carefully gathered, and labeled "Best." It is by continual selection of seed from the most perfect flowers, combined with care in cultivation, that all the choice double varieties have been brought to their high excellence.

Green Houses for the People ...No. I.

EXPLANATIONS.

A COLD GRAPERY is a glass structure, in which grapes and other plants are protected, but are grown without artificial heat.

COLD FRAMES are simply low movable boxes, covered with glass, for the partial protection of various garden plants. No artificial heat is used.

AN ORCHARD HOUSE is similar to a cold grapery, usually on a larger scale, for growing peaches, pears, apples, cherries, apricots, plums indeed all kinds of fruit, under the protection of glass, but without artificial heat.

A HOT-BED is a bed of soil warmed by *bottom heat*, such as is produced by the fermentation of manure. It is usually covered with glass.

AN ORANGERY, is similar to an orchard house, but is devoted entirely to orange trees, and is provided with some simple means of heating to prevent freezing in cold weather.

A GREN-HOUSE is a structure in which tender plants are sheltered and kept green, and usually in growth, during cold weather. See next page.

A CONSERVATORY differs little from a greenhouse, but it usually implies a glass house on a larger scale, designed mainly for *show*. The Chatsworth Conservatory in England is so large as to furnish a carriage drive, and extensive foot paths. The ornamental glass structures for plants, upon the sides of dwellings, are generally designated as conservatories. The term is applied to all sorts of structures for *conserving* (or protecting) plants.

A STOVE, or HOT-HOUSE, is a glass structure for the growth of exotic plants, especially those from hot climates, and is provided with apparatus to keep up an even tropical temperature throughout the year.

A PALM HOUSE is a hot-house devoted to the growth of palm trees only.

A PINERY is a hot-house devoted exclusively to the artificial growth of pine apples, and is supplied also with bottom heat.

FORCING HOUSES are glass houses in which any kind of plants are grown out of season by artificial heat, etc.

A PROPAGATING HOUSE is either a greenhouse, or a hot-house, which is devoted entirely to the multiplication of plants.

A "CALCUTTA" is a name given in England

to a structure designed for *forcing* the growth of pine apples only. It is similar to a pinery.

THE GREEN-HOUSE.

A letter before us says: "Many readers of the *Agriculturist*, ladies especially, who live in retired localities where there are few amusements, would be glad to cultivate their taste for flowers, and devote some time to the care of a green-house; but they are deterred from any attempt in this direction by their entire ignorance on the subject...." The letter proposes a number of inquires in regard to the least expense,

Fig. 1.—OUTSIDE VIEW OF A BAY WINDOW.

smallest dimensions, heating, etc., etc. The subject is very extensive, if taken up in all its details, and those interested in it should procure one or more works devoted entirely to the topic.* We will, however, offer a few hints which may be useful, and perhaps lead many persons to make a beginning at least. A very good green-house, on a small scale, may be put up at little expense. Success in the planning, and especially in the after care, depends mainly upon the taste, skill and constant attention of the owner.

The object of a green-house is not merely to protect tender plants from cold or frost, but to furnish a genial atmosphere that shall not only increase the growth and development of plants that are ordinarily cultivated in a Summer garden, but also render it practicable to grow many plants not adapted to out-door culture. The main requisites are: Plenty of *light* and plenty of *fresh air*, with a due degree of *warmth* and *moisture*. Any structure, no matter how simple, in which you can command these four requisites at all seasons, is a good green-house; any structure, no matter how costly or showy, is a failure, if these four requisites can not be secured.

The simplest form of a green-house is a well lighted room in a dwelling, uniformly warmed in cool weather by a stove, or by a basement furnace, and kept constantly supplied with moisture by frequent sprinkling, and with fresh air by ventilators or windows. The main objections to such a room are: the difficulty of keeping uniform heat and moisture night and day, and the fact that if light be admitted by windows on only one or two sides, the plants will tend to grow one-sided, as they always develop most rapidly towards the strongest light. Frequent turnings of the different sides of the plants to the light, will partially overcome the last named difficulty; while constant care and the use of steady burning fuel will measurably remedy the first named. The syringe or sprinkler will help to overcome the lack of a moist atmosphere. With the inexperienced, the most common error is an excess of heat, especially at a time of year when most plants should be in a state of comparative rest. The main thing at all seasons is to have only so much heat as is required to keep out frost. The less *artificial* heat we have, the more perfect will be the growth and development of the plants. A simple cheap thermometer should always hang in every green-house, to mark the degree of heat. With attention to these general rules, it is not impracticable to have a green-house, or green-room, within many of the dwellings of our land. Perfection may not be secured; but, as in many other things, mediocrity is far better than nothing.

A "*Bay Window*," as it is commonly called, (figs. 1 and 2,) makes a good green-house on a small scale, if it is connected with a warm room, and is not on the north side of the house. It adds very greatly to the value of such a window, to cut it off from the inside room by glass doors, as shown in fig. 2. These enable one to readily admit warm air from the room, or to shut the plants off from an over-heated atmosphere, and at the same time to admit external air, without introducing an unpleasant current into the house. So also, the closing of these inner sashes enables one to readily secure a damp atmosphere around the plants. The floor boards of bay windows should incline a little downward towards some point where there are small holes to allow any surplus water to flow outside of the house. Such windows are easily managed; they cost but a trifle, and they are always beautiful and pleasant to look upon, both from within and from without. Let them be generally adopted, where larger structures are not practicable. By an error in making the

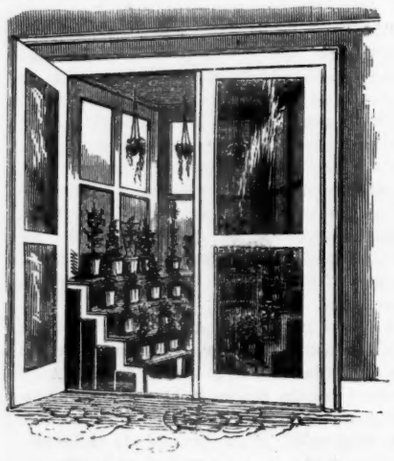


Fig. 2.—INSIDE VIEW OF A BAY WINDOW.

sketch, fig. 2, the plants are shown lowest at the inside. The higher plants would thus obstruct the sun's light. The shelves for pots should be lowest in front—on the outside—so as to have all the plants directly exposed to the sun.

Immediately connected with this part of our subject are the various glass cases for the table, or window bench, such as the "Wardian Case," the "Ladies' plant Cases," etc. For a full description of these, with several illustrations, see *Agriculturist*, Vol. 19, page 277, (Sept. 1860). Fig. 3, is a simple form made essentially as follows: The bottom is a wooden box, 5 to 6 inches deep, lined with zinc, with a hole and plug, to draw off surplus water. The corner frames are of wood, about two inches square, or proportioned to the dimensions of the case, which may be of any size desired, from one foot up to half a dozen feet in length, and of proportionate width and hight. The sides and top are covered with window glass set in sashes. A side door and an opening at the top to admit of ventilation when needed, complete the structure, except the painting inside and out, which may be of any color; green is usually preferable. Any carpenter can get up such a case, and it answers as a very good substitute for a diminutive green-house. The rules first given above, in regard

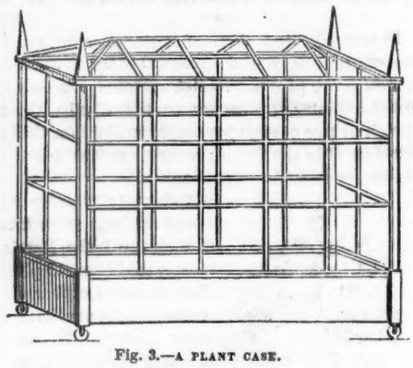


Fig. 3.—A PLANT CASE.

to the light, moisture, warmth, and ventilation, of course apply to all these structures for plants.

In another article, we shall describe green-houses proper, especially those of small cost, and adapted to the circumstances of the masses.

[* We know of no very valuable book for popular use published here. Perhaps the best one is "Leuchar's Work," costing $1.25. This, though in some respects objectionable, may well be procured and studied by all who contemplate even the smallest attempt a green-house.]

To Obtain and Preserve the Perfume of Flowers.

Did it ever occur to the reader to inquire whence and how are obtained the vast amount of odors or perfumery of flowers, that is used throughout this and other countries? A large portion of the perfumery used in this country, in Great Britain, and in other parts of Western Europe, is obtained from the Southern part of France, where seeds and flowers are raised by scores of tuns for this purpose. The odors are first absorbed by purified lard, and the perfumer afterwards extracts the scent by the use of spirits of wine (alcohol). A very few kinds of plants are used for this purpose, the great variety of perfumes being skillful combinations of a few. But every lady who has in the garden the Lily of the Valley, the Honeysuckle, the Myrtle, Clover Pink, Roses, or other odorous flowers, may be her own perfumer. All she needs is a little pure lard. Common lard may be purified by melting, and pouring it into water a few times. Dr. Piesse gives the following directions:

At the season when the flowers are in bloom, obtain 1 lb. of fine lard, melt it and strain it through a close hair sieve [or cloth], allowing the liquid fat as it falls from the sieve to drop into cold spring water; this operation granulates and washes the blood and membrane from it. In order to start with a perfectly inodorous grease, the process may be repeated three or four times, using a pinch of salt and a pinch of alum in each water; it is then to be washed five or six times in plain water; finally, remelt the fat, and cast it into a pan, to free it from adhering water. Now put the clarified fat into a glue-pot, and place it in such a position near the fire of the green-house, or elsewhere, that will keep it warm enough to be liquid; into the fat throw as many flowers as you can, and there let them remain for twenty-four hours. At this time strain the fat from the spent flowers, and

add fresh ones; repeat this operation for a week; we expect, at the last straining, the fat will have become very highly perfumed, and when cold may be justly termed *pomade à la héliotrope*. To turn this pomade into an extract fit for the handkerchief, all that has to be done is, to cut the perfumed fat into small pieces, drop it into a wide-mouthed bottle, and cover it with highly rectified spirit, in which it must remain for a week. When strained off the process will be completed.

Good Method of Planting Strawberries.

In transplanting, it is of importance to the immediate growth of the plant, that the roots be properly spread out, and not crowded together in the hole prepared to receive them. Mr. Tobias Martin, a nurseryman in Franklin Co., Pa., sends to the *American Agriculturist* a description of his method of accomplishing this, in planting out strawberries—it is equally applicable to other plants which have spreading, fibrous roots. The illustration shows the manner of operating quite plainly. In the center of the hole, a little cone of earth, (not so regular or smooth as the one shown in the engraving,) is raised nearly level with the edges of the opening; the plant is set on the top of this, with the roots spread about its sides, and the hole filled with earth. It requires little additional trouble to transplant in this way, but it would seem to be worth the extra labor. We have practiced this method for a number of years, and have already advised our readers to adopt a similar plan.

Another Simple Fruit Gatherer.

In the last number of the London Gardeners' Chronicle, just at hand, we find a sketch of a home-made Fruit Gatherer which we re-engrave for the *Agriculturist*. It is very simple, and can be made in a few minutes by any person. We believe a similar implement is used in Germany for gathering apples, pears, and other large fruit. *a* is a round or oval piece of wood, say an inch thick, into which are inserted a number of *round* pegs, *b*, near enough together to catch the fruit, and far enough apart to admit the limbs or branches. Nailing the board to a pole, *c*, of any desired length, completes the apparatus. If the pegs are large, round, and smooth, they will not bruise the fruit. They will need to be five or six inches long to hold the fruit, and a curved handle would perhaps be preferable. Probably it would be better to slant the outer end of all the pegs a little inward. It is certainly preferable to shaking the fruit upon the ground, where it can not be hand-picked.

Simple, Cheap, Unpatented Mode of Ventilating or Purifying the air of a Room.

Take a glass jar or other vessel, fill it with water, and invert it, placing the mouth in a pail, or tub, or pan of water. With a tube blow air from the lungs under the mouth of the jar, so that it will rise and displace all the water. Slip a plate, or piece of glass with a wet paper on it, under the mouth of the jar and turn it right side up. Bend a wire in the form of a hook, and attach a small piece of candle to the turned up end. Light this, and removing the plate or glass a little, let the candle down into the air that has been caught from the lungs. The flame and even the burning wick will be extinguished as effectually as if it had been let down into water. Or drop a mouse into the jar, covering it at once, and the mouse will die amost as soon as if in water. This simple experiment any one can try with no other apparatus than a jar, and a large straw, or a tube of any kind. The experiment is important as showing that the air breathed from the lungs is so impure that it will not support life, nor even the burning of a candle or lamp.

In a room 12 or 14 feet square, and 8 or 9 feet high, three or four persons will soon breathe over all the air. More or less air is constantly admitted through cracks and crevices, but in a tight room warmed by a stove, the change of air is far from rapid. With the good old fashioned fire-place, having a wide-necked chimney, the change of air was more rapid, and the occupants of rooms so warmed were healthier and stronger than those dwelling in the modern, tight, stove heated rooms.

Mr. David Lyman, of Middlefield, Ct., informed us some years since that he had devised a cheap simple plan for ventilating close rooms, in which he had great faith: and now after four years' trial in his own house, and in the dwellings of several of his neighbors, he has become so thoroughly convinced of its utility, that he desires to throw it open to the public, untrammeled by any patent. Any tin or sheet-iron worker can make the required pipe. [The engraving here shown was made by Mr. Wm. Howland, 229 Broadway, N. Y., and duplicate copies can be had of Mr. Lyman by all editors desiring them, at the mere cost of making the duplicate plate.]

The ventilator is essentially a tin or sheet iron pipe, open at the top and set against, or near the chimney, and connected with it at the bottom by an elbow joint or a side pipe. For a room occupied by three to six persons, he recommends a pipe 7 inches in diameter if round, or 5 by 10 inches if oval or flattened. For a larger number of occupants, he recommends an 8-inch round pipe, or better, an oval one 5½ by 11 inches. The cost varies from $2½ to $4, according to form, size, and length.

The action is represented by the arrows in the engraving. The cold air comes in through the windows, doors, or cracks, as indicated by the arrows not having feathered ends. Being heavy, it settles downward as shown by these arrows. It is warmed both by being breathed, and by coming in contact with the floor and furniture, when it rises upward as shown by the arrows with feathered ends. The rarified air in the upper part of a room, which has been rendered most impure by exhalations from the body and the lungs, is drawn off by the draft of the chimney, *down* through the pipe, and is carried away. The object of this arrangement is, to take off the air from the upper part of the room, and at the same time avoid spoiling the draft of the stove pipe by any opening above the entrance.——In rooms warmed by basement furnaces, where the pure warm air first rises to the top, before being used, the upright pipe is not needed, but simply an opening or short pipe at the *bottom* of the chimney flue.

Such is Mr. Lyman's plan, which he esteems of great utility, and claims that it has given the highest satisfaction in some forty dwellings where he has induced people to try it, or to let him put up one for them at his own expense. We must certainly give him credit for his unselfish efforts to induce people to use pure air, and we shall not call in question his belief that this is one of the best means of securing it.

Preserving Eggs.—W. R. Handy, Iron Co., Mo., writes to the *American Agriculturist* that eggs may be preserved fresh a whole year, as follows: Enclose as many eggs as convenient in a piece of mosquito netting or other thin cloth, plunge them in boiling water for twenty seconds,

then put them away in any cool place. This does not look plausible, but it may be easily tried with a few eggs. If it succeeds, of which Mr. H. is certain, the directions are valuable. He says all who find it successful, owe him a dollar, but he remits the payment on condition that they each obtain one new subscriber to the *Agriculturist*, to which we, of course, have not the least objection.

Care of an Aquarium.

Can the editor or any of the readers of the *American Agriculturist* inform me what I can do for prevention or cure of the green moss, or sediment, which accumulates on the sides and stone work of a fresh water Aquarium, and oblige a constant reader—perhaps many?

To this request, our friend and valued correspondent, R. A. WEST, ESQ., replies as follows:

The green moss or sediment spoken of by your correspondent, is almost always the consequence of *the aquarium being placed in too strong a light.* When the tank is overstocked with animals, the water will become *cloudy*, opaque, and muddy. This condition of the water can only be remedied by increasing the amount of vegetation, or by reducing the number of animals, although it may be temporarily relieved by additional aeration—by syphoning the water off and pouring it back into the tank in a small stream from a considerable hight. The impurity of the water, however, will return, so long as the consumption of the oxygen is greater than the supply—in other words, so long as the animals are in excess of the plants.

But the green moss which gathers on the glass sides of the tank and on the rocks, is a purely vegetable matter, and when it forms so rapidly as to give the water a green, opaque appearance, is the result of too much light, causing the confervæ to germinate and grow too rapidly. I have prevented it easily and totally, when I have not chosen to alter the situation of the tank, by covering the window panes with white paper, or by covering the sides of the aquarium most exposed to the light with the same material. This latter mode, however, somewhat mars the beauty of the aquarium. This excess of confervæ will not occur if the tank is placed in only a moderate light—say a light equal to that of the center of an ordinary sitting room.

But when this green moss becomes a *sediment*, the case is different. It is then a valuable acquisition to the aquarium, being itself a potent means of aeration. When the sediment fixes itself to the glass, however, it obscures the view of the inmates, as effectually as if it were still floating loosely in the water. But it is easily removed, and easily kept under. You have only to take a piece of shingle or other light board, a foot long and a couple of inches wide, tie a piece of sponge or muslin firmly at one end, and rub it up and down on the inside of the glass, and the deposit will be removed. By giving five minutes to this work every morning, the glass will be preserved clear and bright. When the sediment falls upon the rocks and pebbles, *it should not be disturbed*, but allowed to grow as freely as it will. It adds greatly to the beauty of the aquarium and immeasurably to the health of its inhabitants. My own impression is, that an aquarium, the rocks and pebbles in which are freely covered with this beautiful moss, would need no other plants, so freely is oxygen discharged by it.

If your readers will regard these hints, first as to the equalizing of the animal and vegetable life in the tank; second, as to the exclusion of all excess of light; and third, as to the cleaning of the glass sides, they will find no difficulty in keeping their aquaria in perfect order for months without changing the water. I *know* that whereof I affirm. *I have done it often.* But let me add a fourth hint. Never disturb the rocks and pebbles, at least not until a good coating of green moss has settled upon them. Many aquaria are ruined by constant changes in the arrangement of the rocks. *Let them alone*, and your aquarium in a few months will be "a thing of beauty and a joy forever."

R. A. WEST.

Premiums for In-door Manufactures.

GOOD EXAMPLES.

While the various Agricultural and Horticultural Societies have been liberal in their premiums for farm and garden crops, stock, implements, machines, floral designs, and the fine arts, the household, with its various appurtenances and manufactures, is too frequently neglected. This fault might be remedied, to a certain extent, by allowing ladies to take a more active part, not only in the arrangement and fitting up of the hall where the exhibition is to be held, but by appointing them as some of the standing officers to assist in designating and classifying the articles and manufactures worthy of greater encouragement, particularly in the household economy.

The Clearfield, and the Macon Co. Agricultural Societies in Pennsylvania have set good examples. In their circulars for this year we find premiums announced for wheat, corn, and rye bread; for several kinds of cake, pies, jellies, ice cream, preserves of several named sorts, butter, cheese, fruit in cans or bottles, dried fruits, pickles, maple and sorghum syrup and sugar; for cured hams, dried beef, hard and soft soap, various domestic cloths, carpets, bed clothes, shawls, hose, mittens, yarn, thread, patch-work, worsted-work, crochet and embroidery, lamp mats, tidies, shirts, bonnets, slippers, coats, vests, pants, straw hats, wax flowers, etc.

A Short Lecture to Husbands.

To the Editor of the American Agriculturist.

The other day I accidentally overheard part of a conversation which interested me much, and set me to thinking, and finally to writing this article. "I wish the women could talk a little more sensibly about what is going on in the world," said the speaker. "When they meet, there's nothing discussed but neighborhood gossip, and the faults of servants, and how to make pickles and preserves. As for the topics that interest men, women are generally as ignorant of them as though they were deaf, dumb, and blind. Now there's my wife, good soul that she is, can keep house with any woman in the land. Every thing is neat and tidy at home, the cooking is first rate, the children are kept all straight, no torn frocks, nor shabby trowsers, but that's all. When I want some one to talk with about the war, or the prospects ahead, or anything more than household matters, I have to go to the store or the tavern, or to a neighbor's." I had no time to listen to the reply, but here is *my* answer, for his benefit and that of hundreds more who think, if they do not allow themselves to say the same things.

Shame on you Mr. Grumbler, for making your wife's devotion to your interests and comfort, the occasion of complaining. Why is she ignorant of the topics which interest you? While you are enjoying your newspaper, very likely she is trying to prepare your supper, keep the children from disturbing you, and at the same time to forget the headache which a hard day's ironing has brought on. In the evening when you hasten to the store or to a neighbor's to talk over the news, she has Johnny's stockings to mend, and Sarah's frock to patch, and the bread to mix, and fifty more things to look after, that never trouble you, because she takes the whole burden. So she goes on from day to day, with head and heart and hands full of household care. You know she refused to keep hired help because you could not afford it, preferring to sacrifice comfort, intelligence, health, and perhaps life itself in "keeping house," that you may be happy.

You did not think of all this.—Well now it is suggested, let me tell you how to remedy it, for I'm vexed enough to be very bold. You have opportunity for becoming informed on the topics of the day by conversation and reading: share the benefits with your wife. While she mends the stockings, read the newspaper to her. If you do not enjoy reading it a second time, then wait until she can listen before opening it. As you read, explain what is necessary to make it interesting. Try to be as entertaining as you would when visiting your neighbor, and very soon there will be a response that will make you glad to stay at home. If there be children in the family old enough to take part in the reading and conversation, they may join you, taking their turns in reading, and very soon you may have a charmed circle about you that will make home a paradise on earth, both to them and to yourself, as it was meant to be; and you will bless the day you received this lecture from

MARTHA.

The Three P's.

[The importance to parents of the hints given in the following extract from Dr. Hall's Journal of Health, is a sufficient excuse for making room for them here—to the exclusion of original articles from our own contributors. The *italics* are our own.—ED.]

At the close of the last century, a poor, awkward, uncouth boy entered London, but he was so long, lank, and ungainly, that he seemed fit only to be the drudge of a printing-office—run errands, bring water, sweep the floor, and the like. Already had poverty and the hardness of the world made him sour, unhopeful, and despondent. Under less discouragements, many a youth has abandoned himself to a thriftless life, having no higher aim than to live but for the day; or, worse still, has plunged headlong into all the extravagances and indulgences connected with thriftlessness and crime. But the boy had *vigorous health*; this imparted to him a mental vim, a moral power, which soon showed itself to his employer. He was *Prompt*, *Persevering*, and *Painstaking*; and with these three qualities, in spite of the fact that he was good at nothing, in every thing tolerable only, he made his patient way, step by step, to the "woolsack" (that is, the seat of the highest judge in England,) and lately died worth a million of dollars, among the most honored men of his nation and age, Lord Chief-Justice Campbell. In this case, vigorous health was a mine of wealth, a better fortune than if he had been the heir of many thousands. And certain is it, that the world would be a happier world, and the men in it would be happier, better, and greater, if one tithe of the time, and care, and study, which parents bestow on the accumula-

tion of money to leave to their children, *were devoted to the physical education and training necessary to secure a vigorous constitution.* Of any two young men starting on the race of life, one poor but healthy, the other rich and effeminate, other things being equal, the chances for usefulness, honor, and a well-remembered name, are manifold in favor of the former. Every man of the least observation and reflection knows this to be an indisputable truth. Yet, in view of the fact that vigorous health is a better and safer fortune than stocks and bonds, how many in each hundred parents who read this article will lay it down and resolve: "I will do more to leave to my children a vigorous constitution!"

Another element in the success of Lord Chief-Justice Campbell was, that his employer, seeing his dull nature, but noticing at the same time, that when he had any thing to do, he went at it promptly, and with great painstaking kept at it until the work in hand was done, although done painfully slow, he patted him on the shoulder, always spoke cheerfully to him, and with considerate consistency, threw little jobs in the way, by which the heavy boy might earn a little money, and be stimulated to greater activities. How many a youth at school, how many an apprentice in the shop, how many a child in the family, has gone out in the night of a blighted life, who, with humane encouragements, might have lived usefully and died famous, let the passionate teacher and master and parent inquire, *and do a little more patting on the shoulder.*

Cheap Food.

In these times especially, some lessons of economy may, or should be learned by all. At the usual market prices, beans are relatively cheaper than any other article of diet, corn excepted, perhaps. Beans combine the nourishment of both grain and meat, and they should enter more largely into consumption. Good housekeepers should learn how to cook them palatable. Any method is defective, that leaves the beans unbroken. Whether boiled or baked, or both, they should be so thoroughly cooked as to fall to pieces. Uusually they are prepared for the table too dry.——But all the beans raised this year will probably be needed for army use, and command good prices. Corn should therefore be more largely resorted to. A bushel of corn yields nearly as much nourishment as a bushel of wheat, while the latter will sell for two or three times as much ready money. But there is a prejudice against corn, or corn meal, arising mainly from want of skill in preparing it. We have published many methods, and will continue to give others from time to time. What we now suggest is, that housekeepers who are disposed to be economical (and who are not?), should overhaul their recipe books, and the back numbers of the *Agriculturist* and other journals they may have preserved, and try the various methods of cooking corn and corn meal. When they hit upon any preparation that appears to give general satisfaction, make a note of it, and there will soon be found a variety of methods that may pretty nearly fill up a week, and still afford a daily change that will be agreeable. Let it be understood that you are studying economy, and many dishes that would be rejected in ordinary times will become acceptable to the heads of the family. We believe in the doctrine that children should be taught to always eat what their parents do, or rather what is set before them, *without questioning or wrinkling of the face.* This pampering of the appetite, and allowing children to express their likes and dislikes, and be gratified in their whims, is the worst possible training—and the sure way to make them unhappy afterward. A child may be taught to always be happy, and to enjoy any meal that circumstances may place before him in all his future life.

We forgot to name dried peas among the cheap foods. Though not quite as nourishing as beans, they are very good and palatable when rightly cooked, and they afford good nutriment more cheaply than meat or wheat flour. They need to be soaked in cold water until quite soft, and can then be treated as when green; the addition of a little sugar will improve them, and give a taste more nearly like the green vegetable. Pea-soup is quite palatable, and is made by boiling the soaked peas in sufficient water for the quantity of soup required, then mash about one-third of them and stir them in the broth. Add butter and salt and pepper to suit the taste.

For the American Agriculturist.

Cooking Meat—Making Soup.

A writer in the June *Agriculturist*, in speaking of cooking corned beef 'scientifically,' says: "It should first be soaked in cold water until quite fresh enough to be eaten." Shade of Liebig, did you ever hear of such a thing? Now, in the first place, there is no need to have beef so very salt to save it; and in the second place, if it does happen to get too salt, why, freshen it in boiling water, not one degree less than 212°, except you are on the top of Mont Blanc, where water never gets higher than 180°.

We housekeepers always put *cold* water on meat intended for soup—or rather the fresh meat bones with which we generally make our soups. The cold water gradually brought to a boil, extracts all the gelatine or sweet portion of the meat, and leaves it in a soluble state in the water or liquid of which the soup is made. Soup meat takes about six hours boiling, or rather slow simmering on the top of the stove, the afternoon of the day before the soup is wanted, as it should stand over night and have the grease skimmed off in the morning before using. The foundation for the soup, if reduced enough, will then have assumed a jelly-like appearance: the bones and meat should be taken out when the six hours are up, and may be considered as of no further use. With us a favorite way of making soup at this season of the year is as follows: Having brought a gallon of "foundation" to the boil, we put in a handful of finely chopped parsley and sage, and ten minutes later a chopped onion and half a pint of peas, if we have any of the white variety in season, (for dark colored peas will discolor soup.) Add to these half a teacupful of rice, a teaspoonful of salt, and a dust of pepper, and in half an hour more you will have a dish to set before the king.

Let the reader remember that if cold water takes the salt out of meat, so will it take out much of the good. M. J. STEPHENSON.

Carroll Co., Ill.

REMARKS.—We must disagree with Mrs. S. in one or two points. *Cold* water will not remove the juices of the meat, or but very slightly so, while it will take out the salt about as well as if hot. As the water is gradually heated so as to warm the fatty portions, it will also dissolve out the gelatine and other juices of the meat. On the contrary, putting the over-salted meat at once into boiling water, will tend to close the outside pores, or, at least, the juices will come out with the excess of salt, and must be thrown away with it. Hence we still advise to freshen meat, when too salt, in cold water; then boil it in no more water than is needed, and save the pot-liquor which will really contain the most nutritious, digestible portions—if it is cooked as we recommend, that is, so as to prevent the escape of vapors. The skimming off of the grease when there is an excess, is desirable——The addition of the peas is also good; but as for the sage and parsley, and especially the onions, why that depends upon whether you are sure that these several articles will just suit the taste of all who are to partake of it. Kings may all like onions; but we know of more than one American Sovereign who would not object to onion juice as an outside poultice, when needed, but who would be constitutionally opposed to having a forced inside application, or go without dinner.—ED.]

For the American Agriculturist.

A Word to Mothers.

The chilly Fall mornings are coming on, or rather are on us now, and in many of our farm houses there are no hands but mother's to tend baby, and dress the little ones, and get breakfast. There is perhaps no hour during the twenty-four so trying to a mother as this, and no wonder that baby is often neglected, and tosses around in his little night-gown till he gets cold feet and wind colic, and cries as if "pins and needles were sticking in him."

The only thing to be done then is to have out baby's winter stockings at once, put them on the first thing when you get up in the morning, also a flannel petticoat, and a long sleeved sacque, and then he can toss around at will until breakfast is over, and the mother can get time to wash and dress him.

This is now emphatically the season for croups, coughs, and colds, far more than mid-winter; the middle of the day is too warm for thick clothes, and the morning and evening too chilly for thin ones. No wonder that the Fall, on this account, is the harvest for fever and ague in the West. To every mother of a family, then, let me say, get out the winter clothes, put them on gradually as they are needed, and so secure health and comfort to your little ones. M. J. STEPHENSON.

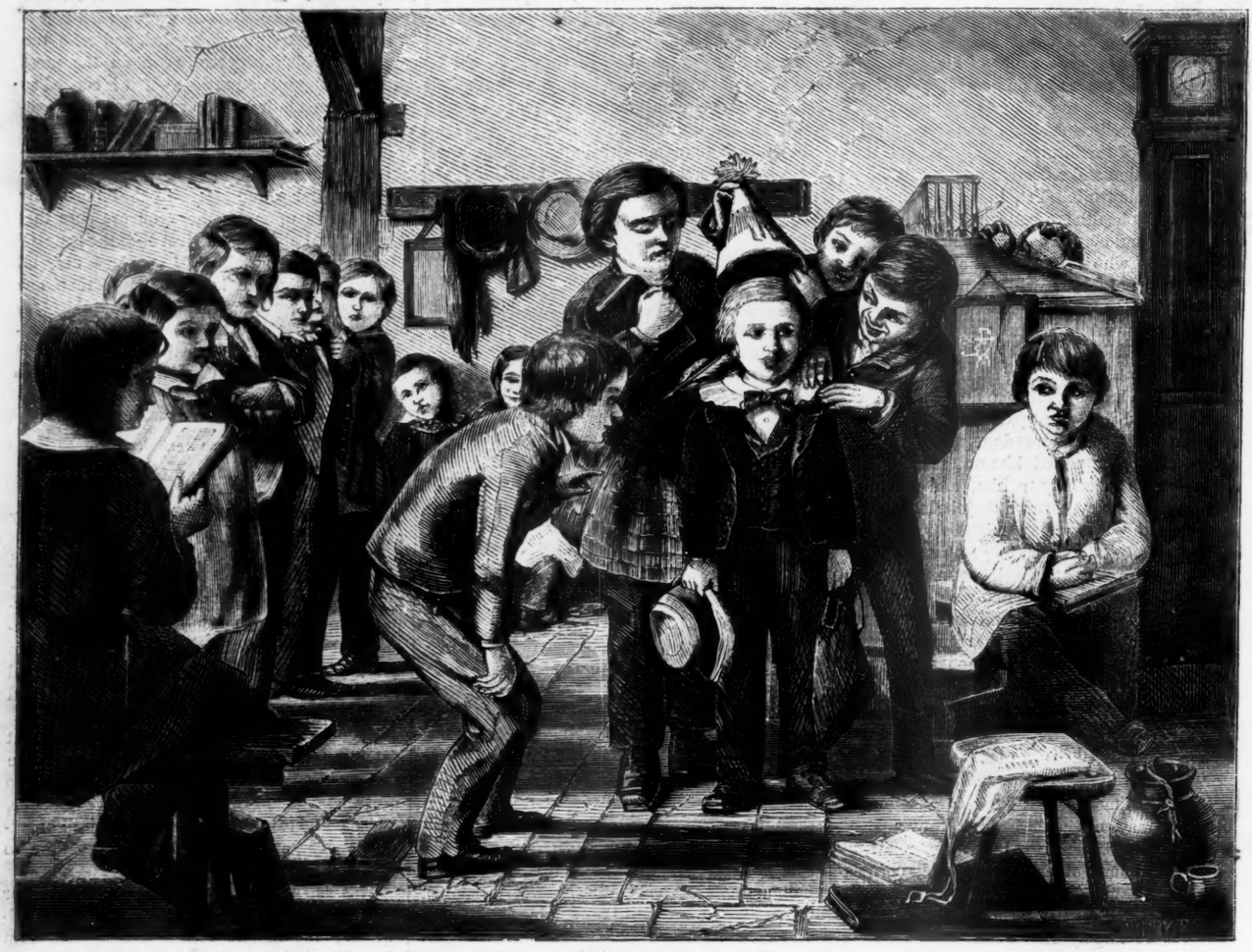
Carroll Co., Ill.

Good Green Corn Cake.

The following we have used the present year, and found it very good. Take eight ears of green corn, and either grate, or shave off the kernels and mash them fine. Mix with two beaten eggs, 1½ pints of sweet milk, a teaspoonful of salt, not quite a teacupful of sugar, and flour enough to make the whole into a batter as for griddle cakes. Bake in the oven, in buttered pans, or cook on a griddle as you would buckwheat cakes. To be eaten hot with butter, they are good without butter.

Tomato Corn Cakes—A Spanish Recipe.

A friend handed us the following which we have tried and like well: Take a dozen ears of green corn; split the rows of kernels lengthwise with a knife, then shave off and mash with a rolling pin; or grate off the kernels fine. Scald a dozen medium sized tomatoes and remove the skins. Beat three eggs well, and mix the whole with a pint of milk, and flour enough to make a batter. Add salt, pepper, and allspice to the taste. Fry on a griddle in the same manner as buckwheat cakes, avoiding excess of grease.



THE FIRST DAY AT SCHOOL.

(Engraved for the American Agriculturist.)

The Editor with his Young Readers

About the Picture.

Several things in the interesting engraving above will cause a smile, and there are also many items to think about. The center of attraction is the innocent looking little fellow who has just made his first appearance in the school-room, and who is undergoing one of the severest trials of early life. His neat dress, the careful manner in which his collar is put on, and his neck handkerchief tied, and his general appearance, show him to be a mother's pet. Poor fellow! he has been accustomed only to pleasant words and approving smiles, and he is utterly bewildered by his rude reception. But this experience, however painful, may make him more manly, by teaching him to rely upon himself, and not merely on the favor of those around him; and as he learns this lesson he will not be easily teased, and then others will seldom try to annoy him. He will soon find that out, for you see he does not cry, but bears the infliction well.

What a contrast between the faces of his tormentors and that of the meek little stranger. The tallest of the group looks bright and intelligent, but idle and reckless. Very likely he had been placed in the middle of the room, with the "dunce cap" on his head on account of some misbehavior. The one on the right appears like a hard-hearted boy who enjoys pain in others. The remainder of the group seem intent on having sport without thinking what the effect may be.

Observe the sympathizing looks of the boys who stand in order on the line where they were when the teacher was called out. How true it is that good qualities usually grow in clusters: those boys are attentive to their lessons, and possessed of kind and generous feelings. There are many other points in the picture that we might refer to, but you will take more pleasure in yourselves finding and commenting upon them. Study each face, and try to read the characters of the different boys.

How a Boy Paid for the Agriculturist.

A lad living in Northampton Co., Pa., (whose father had left the farm for other business), was very anxious to continue the *Agriculturist*. His mother suggested a plan which he followed, and we give the result in his own words...."I picked up all the bits of iron, brass, screws, nails, etc., that I could find, and now I have just taken them to the foundry, and received $1.60—one dollar of which I here enclose for the next volume of the *Agriculturist*. I tried to get some new subscribers, but the people here are old-fashioned farmers, and you can't beat ideas into them, so here comes my lonesome name after many discouragements...." We predict that that boy will make a successful man, for such perseverance can scarcely fail in whatever line it is directed. Every one may not have the facilities for obtaining subscription money in the same way as this lad did, but almost every boy can do it in some way, and quite likely with less difficulty.

The "Know How."

An old negro who had been employed to butcher a calf, demanded a dollar for his services. "Why, you rascal," said the employer, "it's too much altogether, it did not take you half a day." "Yes, yes, massa," replied the negro, "me charge fifty cents for de work, and fifty cents for de *know how*." The amount was paid forthwith. The negro was right; the "*know how*" is just what is wanted in every business, and it will always command a good price. Whatever trade or occupation you may be taught, keep in mind that every thing learned about it will be valuable. We have a friend who many years ago was employed as clerk in a wholesale cloth store. He knew little of the business when he commenced, but he at once procured and read all the books he could find relating to the manufacture and sale of cloth, so that in a few months he was better informed on the subject than most other salesmen in the establishment. This made his services more valuable, and he was rapidly advanced, until now he stands at the head of one of the first firms in this City. He had the "*know how*," and could command success.

A Luscious Peach—A Noble Boy.

Few of our readers will ever forget the interesting item we published last December, entitled "Bite Bigger, Billy." It has gone the rounds of the entire press of the country, though it has long since ceased to be *credited* to its true source. We have seen it already in several foreign journals, and we trust it has been and will be the means of inspiring higher impulses in many a boy's heart. Here is another somewhat similar incident, that occurred under our own observation as we chanced to stand at our door a few days since:

A man was carrying some peaches past the *Agriculturist* office. They were contained in baskets, covered with cloth, and slung over his shoulder, making a pretty heavy load. By some means one of the covers became loosened, and quite a number of the tempting looking peaches rolled down upon the side-walk, and the man went on without perceiving the loss. A poorly dressed little boy, about ten years old, who was

walking a little way behind, observed them, and immediately picked them up. We expected to see him put them in his pockets and run away; but we had mistaken his character. "Here! here!" he shouted to the man, who stopped, and the honest little fellow restored him his property. He was rewarded with one of the finest of the peaches, and went on his way rejoicing—but that was not all. Just then he met two of his companions, and immediately *divided his peach with them.* Was not that a noble hearted little fellow? We could but love him, ragged and dirty as he was. The part of the peach he had for his own portion, was sweetened by kindness, by honesty, and generosity, and was more luscious than the most costly fruit could have been, if obtained dishonestly.

THE WAR AND CORNS.—"How is your business now?" asked a gentleman of a "corn doctor" who was extracting a troublesome bunion for him. "Poor, very poor; the hardest times I've seen in many a year," was the reply. "Why, surely the *war* does not affect *your* business," said the gentleman. "Yes it does," rejoined the practitioner; "people wear their old boots and shoes now, and they don't get corns."

About the Treasury Notes, etc.

As a matter of special interest at this time, we present a wood engraving of the *face* of one of the new United States Treasury Notes, now being issued by the Government. The notes themselves are just the size of the one here shown, but they are engraved on steel, with much finer lines and more beautiful than we could print them even on the good paper used for the *Agriculturist.* Those issued by the Government are on the best bank note paper. In the notes themselves, the large ornamental C's behind the words United States, and also the figures **100** in each lower corner, are printed in green color. The four names on our engraved note are fictitious ones, put in to show how the notes look when complete. On the genuine notes and coupons the name of the U. S. Treasurer, or his Assistant, is inserted in the place of Stearns and Jocelyn, and the purchaser's name instead of Bennett. The back of the note is beautifully engraved with lathe-work, printed in green, with daily rate of interest, etc. Notes of four different denominations are made, viz: for $50, $100, $1000, and $5000. This one is for $100. The annual interest is seven and three-tenths per cent, that is, 7 cents and 3 mills on the dollar, or 730 cents for $100, which for 365 days is just 2 cents a day, or 1 cent a day for $50. The interest on the first fifty million dollars is to be paid every six months, reckoning from the 19th day of August—the day on which the loan was given out. This interest is to be paid either at the Treasury Buildings at Washington, or at any one of the depositories of public money, at New-York, Philadelphia, Boston, Cincinnati, St. Louis, etc. To save the trouble of carrying a note to one of these paying offices, *coupons* are attached to the notes. A coupon on a note, or on a railroad or other bond, is something to be cut off. (It is pronounced koo-pong.) These notes run three years. At the end of the first six months, the first coupon is cut off, and carried or sent to a paying office, and exchanged for the interest it calls for, in gold. These coupons, as they become due, are just as good as bank bills, (better than many bills,) for they will command gold. They can therefore be sold to the nearest bank, for gold, and will doubtless be taken by merchants and all others just the same as money, so that no one will have to trouble himself to go or send to the Treasury for money. Any of our distant subscribers can send one of these notes or coupons, in payment for a club of subscribers, if he have one or can buy one from a neighbor. In short, both the note and the coupon will everywhere answer for money. The coupons are not good until about due. There are five coupons, for five half-yearly payments of interest. The sixth coupon will be the note itself, for the last payment of interest will be made when the note itself is paid at its maturity in three years. Any holder of these notes can, at any time, change them for 20-year notes, which are more valuable where one wishes to put out money permanently at interest.

The notes grow more valuable daily, because the interest is all the while accumulating. If one of $50 is bought today, (Sept. 17,) it costs $50.30, because it has accumulated one cent a day interest since Aug. 19, which the holder will get back on the 19th of February. If bought or sold on Nov. 1st, it will then be worth $50.73. It will thus be seen that these notes will be a very convenient form of holding money. They are money that draw interest every day they are held, which is not the case with bank bills or gold. Besides, these are otherwise just as good as gold, because they are to be paid in gold; while they are superior to bank bills, because they are secured by all the property of the country. If the government of our country could fail, nothing else would be of any value. So we see that these notes are the very best investments one can make, if money is to be put out on interest. The interest itself is over seven per cent, which is higher than most other safe investments pay.

But there is another even stronger reason why every body should buy what he can of these notes, even if it be but one of the smallest. The government is engaged in a war which concerns each of us, and upon the success of which depends any future value our homes and our possessions may have. Money is required to carry on the war—to buy guns, ammunition, ships, build forts, etc., and to clothe, feed, and pay the men who fight *our* battles for us. Usually, money for war purposes is borrowed of capitalists—much of it generally from other nations who are at peace and can spare it easily. In the present case, some of the leading aristocratic men of Great Britain who have long been jealous of the example of our great *free* country, are trying to prevent us from borrowing money abroad.

Our government does not beg the favor of any money from them, but calls upon the people here to loan the money, and themselves receive the interest paid. We are glad this is done. Let us all take hold, and if one can not get enough to buy even a $50 note, let two or three join together and take one, and let the lords and nobles over the water keep their money, only as they send it here to buy our wheat and corn. *We* have a government made, and controlled, and changed, by the people themselves; we, the people, are the government—every man having an equal voice. The great London Times may continue its denunciations, and its efforts to keep England and the rest of Europe from lending money on Treasury Notes. We have not asked them to do so, and shall not. The money we pay to carry on the war and the government expenses, is all expended again here. Those foreign people, who can only get two or three per cent a year for the money, will be very glad by and by to pay a premium for our seven per cent notes—if we choose to let them have any—when they find a great free government can take care of itself.

A Living Hippopotamus,

The first one ever brought to this country, we believe, is now to be seen at the American Museum, in this City. We had prepared an engraving and description of him, but have not room for it. Those who can do so, will, of course, take a look at the animal, as he is well worth seeing. And here we will add, that with all Mr. Barnum's reputation for humbug, he does certainly furnish a world of curious things—a collection that abundantly pays for a day's visit to the Museum, and the 15 or 25 cents admission fee.

The Brave Gander.

Since the war commenced it has become fashionable to dress boys in military costume. The Zouave dress, particularly, is very popular, and we often see boys just large enough to wear pantaloons, rigged out in this style, and with wooden gun and toy knapsack complete. A little friend of ours, six years old, was greatly elated when his mother clothed him in a complete Zouave suit. He paraded through the house, shouldered the broomstick, for he had no gun, and quite terrified his sisters by showing how he would fight the enemy if he had a chance. To hear him talk, one would suppose he never felt fear in all his life. Presently he left the house and went out to the barn-yard to practice the zouave drill among the pigs and chickens. He set them running in all directions by his furious charges, and was having fine sport, when he suddenly found warmer work than he had expected. In one corner of the yard was a goose sitting on her nest in a little pen which had been built for her. This he called Fort Moultrie, and started to drive out the unsuspecting occupant; but no sooner had he commenced operations, than the old gander, who was standing sentinel near by, gave a defiant scream, and charged on *him* with mouth open and wings extended. Poor Charlie was utterly unprepared for this, and turned to execute a retreat. The gander, like a true general, followed up his advantage, seized Charlie's pantaloons behind, and gave him an unmerciful beating with his wings. His screams soon brought his mother and sisters to the rescue, though they could scarcely help him for laughing. Charlie was badly bruised, and thoroughly cured of his boastful spirit.

The Poor Dandy's Ruse.

A dandy in Paris, who had more cunning than money, contrived the following plan for replenishing his purse. After managing to get an introduction to a wealthy young lady, he said: "Allow me to send you a bouquet of flowers by my black servant." He then retired to his room, dressed himself as a waiter, blacked his hands and face, and having purchased a handsome bouquet, carried it to the lady, with the respects of his master. The lady, highly pleased with the gift, presented the supposed servant with a gold coin, worth many times what the bouquet had cost, and thus the dandy realized enough to pay his week's board.

New Problems.

No. 23—*Illustrated Rebus.* This is difficult enough to last a month, we think, but it is readable.

No. 24.—*Arithmetical Problem.*—Contributed to the *American Agriculturist* by Samuel J. Nichols, Racine Co., Wis. It is required to find the least number, which divided by 28, leaves 19 remainder, divided by 19, leaves 15 remainder, and divided by 15, leaves 11 remainder. Give the answer and the method of finding it.

Answers to Problems in September No.

No. 18.—*Illustrated Rebus.*—See page 281. *Answer:* "War turns things upside down, but some things need righting."

No. 21—See page 282.—*Answer:* 301. The readiest solution was furnished by "Farmer's Boy," as follows: The answer must be a multiple of 2, 3, 4, 5, and 6, increased by 1. The least common multiple of these numbers is 60; but 61 will not contain 7 exactly, therefore the answer must be a multiple of 60, increased by 1, and by trial 5 times 60, increased by 1, or 301 is found to be the required number.

No. 22.—See page 282.—*Answer:* 630.

The following have sent in correct answers:

Joseph Badger, for No. 15; M. C. Woolman, 20; Myron G. Willard, 21, 22; "Pickwickians," 18; C. B. Harvey, 18, 22; E. W. Bolles, 22; Isaac T. McLain, 21, 22; R. Jennings Harris, 21, 22; Shadrach C. Bond, 21; Frank Fancher, 21, 22; J. D. Rider, 22; Isaac Oliver, 22; S. R. Kadle, 18; "Farmer's Boy," 21, 22; Samuel J. Nichols, 21, 22.

Agricultural Exhibitions for 1861.

[The following list gives the time and place of all the State and County Fairs yet to be held, that have been reported up to the date of going to press.]

STATE FAIRS.

Name.	*Where held.*	*Date.*
Oregon	Oregon City	Oct. 1— 4
New Brunswick	Sussex	" 1— 4

COUNTY FAIRS.

MAINE.

Kennebec North	Waterville	Oct. 1— 2
Androscoggin	Lewiston	" 1— 3
Somerset West	North Anson	" 2— 3
Hancock	Ellsworth	" 8—10
Oxford West	Fryeburg	" 8—10
Kennebec	Readfield	" 9—10

NEW-HAMPSHIRE.

Hillsboro North	Weare	Oct. 1— 2
Hillsboro South	Milford	" 9—10
Connecticut Valley	Charlestown	" 10—12

VERMONT.

Windsor	Woodstock	Oct. 1— 3
Rutland	Rutland	" 2— 3
Windham	Newfane	" 2— 3
Wilmington	Wilmington	" 8—

MASSACHUSETTS.

Berkshire	Pittsfield	Oct. 1—
Bristol	Taunton	" 1—
Hampden	Springfield	" 1— 3
Plymouth	Bridgewater	" 3— 4
Worcester South	Sturbridge	" 3—
Hampshire, Hampden and Franklin	Northampton	" 3—
Barnstable	Barnstable	" 8—
Worcester South East	Milford	" 8—
Nantucket	Nantucket	" 10—11
Hampshire	Amherst	" 10—
Martha's Vineyard	West Tisbury	" 15—

NEW-JERSEY.

Burlington	Bridgeton	Oct. 1— 2

PENNSYLVANIA.

Monroe	Stroudsburgh	Oct. 1— 4
Crawford	Meadville	" 9—12
Clearfield	Clearfield	" 15—17
Columbia	Bloomsburg	" 17—19

CALIFORNIA.

Alameda	Oakland	" 1— 5
Humboldt	Hydesville	" 8—

NEW-YORK.

Columbia	Hudson	Oct. 1— 3
Cayuga	Auburn	" 1— 3
Albany	Albany	" 1— 4
Oswego	Oswego Falls	" 2— 4
Queens	Flushing	" 2—
Essex	Elizabethtown	" 3— 4
Chenango Union	East Randolph	" 3— 5
Montgomery	Fonda	" 8— 9

TOWN.

Brockport	Brockport (Monroe Co.)	Oct. 1— 2
Cazenovia	Cazenovia	" 1— 2
Canaseraga	Dansville	" 2— 4
Union	Palmyra	" 2— 4
Little Falls	Little Falls	" 2— 4
Skaneateles	Skaneateles	" 8— 9
Wilson	Wilson (Niagara Co.)	" 9—10
Galen	Clyde	" 10—11

OREGON.

Benton	Corvallis	Oct. 3— 4
Lane	Eugene City	" 9—10
Marion	Salem	" 11—12
Washington	Hillsborough	" 16—17
Multnomah	Portland	" 23—24

OHIO.

Richland	Mansfield	Oct. 1— 3
Cuyahoga	Cleveland	" 1— 3
Summit	Akron	" 1— 3
Mahoning	Canfield	" 1— 3
Coshocton	Coshocton	" 1— 3
Carroll	Carrollton	" 1— 3
Wayne	Wooster	" 1— 3
Shelby	Sidney	" 1— 4
Clark	Springfield	" 1— 4
Champaign	Urbana	" 1— 4
Butler	Hamiltion	" 1— 4
Sandusky	Fremont	" 2— 4
Seneca	Tiffin	" 2— 4
Hardin	Kenton	" 2— 4
Defiance	Defiance	" 2— 4
Stark	Canton	" 2— 4
Harrison	Cadiz	" 2— 4
Huron	Norwalk	" 2— 4
Morrow	Mount Gilead	" 2— 4
Van Wert	Van Wert	" 3— 4
Greene	Xenia	" 8—10
Ashland	Ashland	" 9—11
Guernsey	Cambridge	" 10—11

MICHIGAN.

Macomb	Romeo	Oct. 2— 4
Ionia	Ionia	" 2— 4
Kent	Grand Rapids	" 2— 4
Branch	Coldwater	" 2— 4
Union	Ypsilanti	" 2— 4
Horse Show	Kalamazoo	" 2— 4
Calhoun	Marshall	" 8—10
Shiawassee	Owosso	" 9—11
Oakland	Pontiac	" 9—11
Livingston	Howell	" 9—11
Sanilac	Lexington	" 10—11

WISCONSIN.

Green Lake	Markesan	Oct. 2— 3

INDIANA.

Posey	New Harmony	Oct. 1— 5
Union (Johnson Co.)	Edinburgh	" 1— 5

KENTUCKY.

Breckenridge	Cloverport	Oct. 1— 5

IOWA.

Montgomery	Frankfort	Oct. 1—
Marion	Knoxville	" 1— 3
Benton	Vinton	" 2— 3
Guthrie	Guthrie Center	" 2— 3
Jones	Anamosa	" 2— 4
Bremer	Waverley	" 3— 4
Wayne	Corydon	" 4— 5
Davis	Bloomfield	" 4— 5
Dubuque	Dubuque	" 4— 6
Johnson	Iowa City	" 5— 6
Harrison	Magnolia	" 9—10
Tama	Toledo	" 9—10
Van Buren	Keosauqua	" 10—11
Marshall	Marshall	" 11—12
Crawford	Dennison	" 12—13
Hamilton	Webster City	" 17—18

ILLINOIS.

Sangamon	Springfield	Oct. 1— 2
Clinton	Carlyle	" 1— 3
Knox	Knoxville	" 1— 4
Grundy	Morris	" 1— 4
Madison	Edwardsville	" 1— 4
Putnam	Hennepin	" 1— 4
Vermilion	Catlin	" 1— 5
Schuyler	Rushville	" 2—
Lee	Amboy	" 8—11
Monroe	Waterloo	" 15—17

MINNESOTA.

Farribault	Blue Earth City	Oct. 2— 3
Freeborn	Albert Lea	" 3— 4

CANADA WEST.

Lanark & Renfrew	Perth	Oct. 1—
Fullart and Logan	Mitchel	" 2—
Blenheim	Drumbo	" 4—
Durham West	Newcastle	" 4—
Toronto	Toronto	" 7—19
Lanark	Lanark	" 8—
Hay	Rodgerville	" 9—
South Wellington	Guelph	" 10—
Pickering	Pickering	" 16—

CANADA EAST.

Montcalm	St. Alexis	Oct. 2—
Ottawa	Aymer	" 3—
Pontiac	Clarendon Centre	" 4—
Montmorency	Chateau Richer	" 15—
Quebec	Ste. Foye	" 15—

NEW PREMIUM LIST,

For 1862---Vol. XXI.

Or Pay to Voluntary Agents who will attend to collecting names of new and old subscribers to the Agriculturist, and forwarding them to the Office.

Experience has proved that it is a benefit to the subscribers themselves, as well as to the Publisher, to have an *Agent* at every Post Office, to attend to collecting the names and subscriptions of old subscribers, and to present the advantages of the paper to those not yet acquainted with it. But to employ and commission a Special Agent in every neighborhood throughout the country, is out of the question. We therefore offer certain good articles, the value proportioned to the number of names sent in, and leave them open to every person disposed to attend to the business, in the locality where he may be known to be a reliable man. The *pay* offered for a year to come is very large, but perhaps none too much so for the times. By giving the articles offered we can make the pay *much larger* than if in money, because we have facilities for getting these articles at a low rate. Besides, the advertising thus given to the manufacturers, induces them to bear a considerable portion of the expense on the articles we need for premiums.

☞In selecting articles for premiums, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers. ☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

Table of Premiums for 1862.

Names of Premium Articles.	Price of Premiums.	Names at $1 each.	Names at 80 cts. each
1—Clothes Wringer, No. 1	$5 00	13	23
2—Clothes Wringer, No. 2	$7 50	18	37
3—Clothes Wringer, No. 3	$10 00	23	48
4—Sewing Machine, (Wheeler & Wilson)	$45 00	90	130
5—Sewing Machine, (Wilcox & Gibbs)	$35 00	69	98
6—Anerold Barometer	$7 50	19	44
7—Hydropult	$12 00	30	48
8—Five Octave Melodeon (best)	$75 00	125	237
9—4½ Octave Melodeon (best)	$60 00	104	182
10—Four Octave Melodeon (best)	$45 00	90	130
11—New Cyclopedia, 16 volumes	$48 00	96	140
12—Worcester's *Unabridged* Dictionary	$7 50	17	40
13—Five back Volumes Agriculturist, *p.p.*	$5 60	16	30
14—Four do do do do	$4 48	13	26
15—Three do do do do	$3 36	10	20
16—Two do do do do	$2 24		15
17—One do do do do	$1 12		10
18—Windsor & Newton's Paints	$2 50		20
19—Osborn & Hodgkinson's Paints	$1 50		15
20—Hand Corn Sheller (best)	$6 50	21	40
21—Straw and Hay Cutter (best)	$8 00	24	48
22—Best Subsoil Plow (2-horse)	$8 00	24	48
23—Various Books—*See terms below*			

☞ We offer nothing *for competition*. Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing. Every one aiming for a premium, knows just what he or she is working for; and also that if a higher premium is not secured, a lower one can be taken.

☞ Any extra specimen copies, or show bills, needed by canvassers, will be freely furnished.

☞Only one premium can be paid on the same subscriber.

☞ *We make no distinction between new and old subscribers*, but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ The offer of *extra* numbers to new subscribers received now, makes it practicable to begin collecting names at once. Indeed, these numbers are an extra inducement.

☞ Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender.

☞ The premiums are offered for subscribers for Volume XXI (1863), *whenever received*. Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent.

☞ Any person who has commenced sending in names at 80c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

☞ Clubs need not be confined to one Post Office.

☞ No premium is sent till *specifically asked for*, as we have many friends who send in large lists but will take no premium, and we are not certain that premiums are desired, unless the fact be mentioned particularly.

☞ It is believed that all can recommend this journal to their friends and neighbors, and urge them to take and read it. It will continue to be *independent, out-spoken*, and *reliable*, the special friend, advocate, and promoter of the farmer's interests, and will aim to facilitate and lighten the labors of every household. A larger number of instructive as well as pleasing engravings, and a greater amount of really useful information, will be given in the next Volume, than in any preceding one. *Onward, upward*, is our motto.

DESCRIPTION OF THE PREMIUMS.

Premiums. 1, 2, 3.—Wringing Machine.

We place this first, for it is nearly new, and one of the most useful articles for every family. We had one of the first made, and have used it over a year with the highest satisfaction. It completely does away with the hard straining work required to wring out garments by hand. It does not twist and break the fibres of the clothes, but simply presses them between two elastic India-rubber rollers, which are moved by a crank, and whether large or small pieces, they come out drier than when wrung by hand. The saving to garments would soon pay the cost of the implement, to say nothing of the saving of woman's labor. The machine is set upon the side of any tub; the garments drop out into a basket. A child can quickly wring out a tub full of clothes—They are of three sizes.—No. **2**, costing $7 50, is just the thing for common family use. This we present to any one sending us **18** subscribers for the *Agriculturist*, at $1 each, (or **37** at the lowest club price of 80 cents.)——No. **1**, costing $5, will answer very well when No. 2 can not be afforded, but No. 2 is preferable. We will present No. **1** to any one sending **13** subscribers at $1 each, (or **25** at 80 cents.)——No. **3**, costing $10, is adapted to larger families and Hotels. We will present it for **23** subscribers at $1 each, (or **48** at 80 cts. each.) ——We are glad to be able to present this implement as a premium on such liberal terms. One or more clubs for a No. 2 might be made up in almost every neighborhood.

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine,** (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly *four* years' use in our own family, in connection with other machines. We want no better.—The prolongation of life, the saving of health and strength to our females, and the better physical vigor thus secured to the next generation, render the Sewing Machine one of the most desirable additions to the household.——The machines will be selected new at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium No. 5—Sewing Machine.

69 Subscribers at $1 each, (or **98** at 80 cents each,) will entitle the person procuing them to *Wilcox & Gibbs'* **$35 Sewing Machines,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one in our own family for more than a year, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines. (The regular price of this machine is $30, but we have included in our offer $5 extra for the set of *Hemmers*, because those used with this machine are very simple and effective, and should go with every machine sent out.) The machines given as premiums, will be forwarded to the recipient free of expense, except for freight after leaving the city. They will go out set up ready for use, with printed directions for operating.

Premium No. 6—Barometer.

19 Subscribers at $1 each, (or **44** at 80 cents each,) will entitle the person getting up the club to one of *Kendall's* **Anerold Barometers,** (Price $7 50.) This is a good, portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. We have had one in use for nearly two years, and find it not only accurate, but an admirable weather prophet. Scarcely a rain storm or gale of wind has occurred, that has not been heralded by our barometer. Each instrument is packed in a neat leather case, 6 inches square, and 4 inches deep, and this, surrounded by cotton, is enclosed in a wooden box, ready to be carried anywhere by express or otherwise.

Premium No. 7—Hydropult.

30 Subscribers at $1 each, (or **48** at 80 cts. each,) will entitle the person making up the club to the **Hydropult,** (Price $12,) a very useful hand implement for carrying instantly to any desired point, to throw water from a pail, tub, cistern, or other receptacle, for extinguishing fires, watering plants, washing carriages, etc., etc. A stream can be thrown up to the third story windows. It is supplied with jet pipe and rose or sprinkler; is made of brass, and is durable. It weighs only 8 lbs., and can be packed in small compass to go by express or otherwise.

Premium No. 8—Melodeon.

125 Subscribers at $1 each, (or **237** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one for two years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly, by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums, will be sent new directly from the factory at Buffalo, ready boxed, and without extra expense to the recipient, except for freight after leaving the factory.

☞ The above premium list may be made up by the members of a congregation, or Sabbath School, and an instrument thus secured for a church or school-room. This was done in several instances the past year.

Premium No. 9—Melodeon.

104 Subscribers at $1 each, (or **182** at 80 cents each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$60 Melodeons** (4½ octaves.) See No. 8.

Premium No. 10—Melodeon.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$45 Melodeons** (4 octaves.) See remarks above. **N. B.**—Higher priced Melodeons will be given for larger lists, in the same proportion.

Premium No. 11—New Cyclopedia.

96 Subscribers at $1 each, (or **140** at 80 cents each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopedia,** now in course of publication, consisting of *sixteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Twelve volumes are now ready, and the remaining four will be furnished as fast as issued. The original design of this work was 15 volumes, but it is found that the immense mass of matter will require 16 large volumes. The work is sold at $3 per volume, or $48 for the set. To no better purpose could any one devote the coming Fall and Winter evenings than to raising the club of subscribers required to secure this most valuable work for himself and family.

Premium No. 12—Best Dictionary.

18 Subscribers at $1 each, (or **40** at 80 cts. each,) will entitle the person getting up the club to a copy of the *large Pictorial Unabridged Edition of* **Worcester's Dictionary,** (Price $7 50.) This now stands confessedly the most valuable Standard Dictionary published. It weighs nearly **10** lbs.; is **12** inches long, **10** inches wide, nearly **4** inches thick, and contains **1854 pages** of 3 columns each, giving the spelling and pronunciation, with full explanations, of every word in the English Language, and as a source of general information on all subjects, stands next to the Cyclopedia. The Dictionary can be called for at our Office, or be sent by Express or otherwise, to any part of the country. The *United States Express Company* have kindly agreed to deliver the book at very moderate rates to any part of the country where their lines extend. It can also go by mail to any place within 3,000 miles for $1 60, prepaid postage. Except to remote points, the expense will be *much less* by Express. (Persons living off from express lines, can usually have it delivered to some person on the line, and send for it at their convenience.)

Premiums Nos. 13 to 17—Back Volumes.

These premiums (13 to 17,) will enable any one to secure the previous excellent volumes of the *American Agriculturist*, as far back as Volume XVI. We have stereotype plates and can print any number desired of the English Volumes 16, 17, 18, 19, and 20, and of the German Volumes 18, 19, and 20. These will be sent in clean, new numbers, each volume by itself, with index complete, and be forwarded *post-paid*. The whole five can be taken together, or one or more copies of any particular volume be selected, as desired. They will be presented as in the table above, viz: For **16** Subscribers at $1 each, (or **30** at 80 cents each,) we will present **five volumes.**——For **13** Subscribers at $1 each, or **26** at 80 cents each, **four volumes.**——For **10** Subscribers at $1 each, (or **20** at 80 cents each,) **three volumes.** ——For **15** Subscribers at 80 cents each, **two volumes.** ——For **10** Subscribers at 80 cents each, **one volume.** ——Let every one selecting these premiums be careful to name just *which* back volumes are desired.

Premium No. 18—Paints.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid any where within 3000 miles. (If to go to the British Provinces or to the Pacific Coast, the recipient will need to send 84 cents for extra postage above the 6 cents per ounce which we pay.)

Premium No. 19—Paints.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a mahogany case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, they will answer for ordinary practice by children or beginners, and for common sketching. They will also be sent by mail, post-paid. (If to go to the British Provinces, or to the Pacific Coast, $1,05 will need to be sent by the recipient to pay the extra postage above 6 cents per ounce.)

Premium No. 20—Corn Sheller.

21 Subscribers at $1 each, (or **40** at 80 cents each,) will entitle the person getting up the club to one of the best **$6½ Hand Corn Shellers.** (Price $6 50.) This is a convenient, useful implement, very frequently called for. We give the best implement to be obtained for the price.

Premium No. 21—Hay Cutter.

24 Subscribers at $1 each, (or **48** at 80 cents each,) will entitle the person getting up the club to one of the best **$8 Straw and Hay Cutters.** This is a useful implement, needed wherever horses and cows are kept.

Premium No. 22—Subsoil Plow.

24 Subscribers at $1 each, (or **48** at 80 cents each,) will entitle the person getting up the club to the best **$8 Subsoil Plow** (two-horse), a very effective and desirable implement.

Premium No. 23—Good Books.

Here is an opportunity to get a good library at little expense. Any person getting up a club of **16** or more names

may choose any desired Books from the list advertised on page 286, *to the amount of 12½ cents for each name forwarded at 80 cents*, (or 33⅓ cents for each name sent at $1,) and the books will be *delivered to the recipient free of all expense for postage.* ☞ Persons making up a club for any of the preceding premiums, and getting some names over the required amount, will be entitled to books for the surplus names.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Thursday Morning, Sept. 19, 1861.

*** The materials for this review are furnished specially for the *Agriculturist* by a reliable man of long experience, who spends the whole of each day in the markets, watching the transactions and collecting information, and we flatter ourselves that our report is one of the most correct anywhere published.

The following tables show at a glance the aggregate amount of business transacted in the New-York Markets, for a month previous to this date, and also a comparison with the previous month.

TRANSACTIONS AT THE NEW-YORK MARKETS.

Receipts.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
27 days *this* month	479,000	3,401,000	3,605,000	45,150	65,925	398,969
26 days *last* month	325,000	1,784,000	2,434,000	136,247	114,700	449,000

Sales.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
27 days *this* month	533,812	5,473,125	4,439,250	47,137	6,300
26 days *last* month	460,000	3,523,000	3,561,000	165,500	None.

The figures in the above tables indicate a most remarkable increase in the movement of Breadstuffs from the interior, as well as in the sales in this city. We do not remember to have recorded in the *Agriculturist* so heavy a business for a single month. Indeed, the receipts and sales here during the past 27 days, are undoubtedly the largest reported for any other similar period. Reckoning Flour at the customary rate of 5 bushels of wheat to the bbl., we find an *increase* in the *receipts*, equal to 3,372,857 bushels; and an *increase* in the *sales* equal to 3,075,372 bushels as compared with the receipts and sales of the preceding month. And as a further indication of the state of the market, we may add that still heavier sales could have been effected, if the supplies had equaled the wants of buyers. But an unfortunate break in the Erie Canal interrupted navigation for a short time, and curtailed the receipts accordingly. At present, the canals, railroads, and river-barges, are taxed to their utmost capacity in bringing forward Produce from the interior, and yet there is a daily complaint of deficient supplies in this market. Especially is this difficulty experienced in the execution of foreign orders. European Shippers prefer "extra State" and "round hoop extra Ohio" Flour to all other brands; and of such grades the mills, though working constantly, have been apparently unable to make enough to meet the demand. The supplies of *sound* lots of Grain, which suit export buyers, have also been inadequate. There has likewise been a scarcity of vessels in port, and rates on ocean freights have ruled high; all of which circumstances have tended to embarrass merchants having foreign orders to fill. In canvassing these very important, and, so far as concerns the most vital agricultural interests of the country, very encouraging facts, it should not be forgotten that the vast business in Breadstuffs now being transacted, is almost wholly *independent of speculation*—being the result of the legitimate wants of buyers, who are purchasing on English, French, Spanish and German account, and to make good the great deficiency in the crops in most parts of Western and Central Europe. Moreover, from present indications there is no doubt whatever that these purchases must continue to be made in this market, on a pretty large scale, for months to come. Private letters from Europe all agree in this—and that our market, as furnishing the cheapest supplies, must be relied on mainly if not exclusively. Canada has a considerable surplus of food, but the capital to move it seems to be utterly lacking. Montreal houses, which have hitherto been the principal buyers and shippers of Grain, sustained enormous losses on their Winter and Spring purchases, and just now are either unable or unwilling to make any advances, so as to empower the farmers to get their produce to market. In the Northern States there is a combination of circumstances such as perhaps never before occurred; there is a surplus of grain, there is an unusual foreign demand, and there is an extraordinary abundance of money to move the crops. Our farmers have had bad seasons and financial troubles to contend with for years past; the tide is now evidently turned, and this, too, right in the midst of a great civil war. It would be needless to say with how much pleasure the present Review is written—the *Agriculturist* is too closely identified with, and has too long labored for the promotion of the cultivating interests of the country, to be otherwise than exultant over the present features of the markets. The advance in the prices of Flour and Corn, as indicated in the tables below, is scarcely less encouraging than the increase in the receipts and sales.....We are called on to notice a further advance of 3⅛c. ℔ lb. in the market price of Cotton, with less activity, however, and a heavy feeling towards the close....Rice has slightly improved, with a fair inquiry....Tobacco has been in good request, at very firm rates....Hay has been more sought after, for City and Government use, and has advanced....Hops have been more freely offered at declining prices, yet sales have been moderate....Wool of low and medium grades has been in brisk demand for manufacturing purposes, and having been in light supply, has been quoted dearer. It is now quite evident that wool-growers will find a ready market for their stocks of Wool, and that, too, at more remunerative rates than could have been anticipated earlier in the season. The manufacturers are working vigorously on goods for the vast armies collected and collecting, and wool must be had at all hazards. It is believed that the consumption will be very large this year. It is known that a well-paid soldier will spend more money for clothing than a day-laborer, whether the latter be employed in country or city. And the families of soldiers will have more ready money to spare, and will want more costly apparel than customary....The Grocery and Provision markets exhibit more activity....The changes in other branches of trade have not been very important. The table of current prices, below, shows the changes in prices at a glance.

CURRENT WHOLESALE PRICES.

	Aug. 19.	Sept. 19.
FLOUR—Super to Extra State	$4 45 @ 4 90	$4 75 @ 5 45
Superfine Western	4 45 @ 4 55	4 70 @ 4 90
Extra Western	4 60 @ 7 00	5 10 @ 6 75
Fancy to Extra Genesee	5 00 @ 7 00	5 35 @ 6 75
Super. to Extra Southern	5 20 @ 9 00	5 20 @ 8 50
RYE FLOUR—Fine and Super.	2 25 @ 3 50	2 25 @ 3 50
CORN MEAL	2 70 @ 3 20	2 75 @ 3 50
WHEAT—Canada White	1 30 @ 1 35	1 30 @ 1 35
Western White	1 30 @ 1 40	1 30 @ 1 35
Southern White	1 35 @ 1 40	1 20 @ 1 31
All kinds of Red	90 @ 1 30	95 @ 1 30
CORN—Yellow	51 @ 53	55 @ 56
White	52 @	56 @ 58
Mixed	43 @ 59	50 @ 56
OATS—Western	32½@ 33½	33 @ 33½
State	33 @ 34	34 @ 35
RYE	50 @ 65	68 @ 70
BARLEY	Nominal.	65 @ 75
HAY, in bales, per 100 lbs	40 @ 65	50 @ 75
COTTON—Middlings, per lb	18 @ 18¼	21½@ 22
RICE, per 100 lbs	6 00 @ 7 00	6 25 @ 7 00
HOPS, crop of 1861, per lb	25 @ 30	18 @ 24
FEATHERS, Live Geese, p. lb	30 @ 38	30 @ 35
SEED—Clover, per lb	Nominal.	8½@ 8¾
Timothy, per bushel	do.	2 00 @ 2 37½
SUGAR—Brown, per lb	5¾@ 8	6¾@ 9
MOLASSES, New-Orleans, p.gl.	40 @	50 @ 55
COFFEE, Rio, per lb	12½@ 15	13½@ 15¾
TOBACCO—Kentucky, &c, p.lb.	5 @ 17	6 @ 15
Seed Leaf, per lb	5 @ 36	5 @ 30
Wool—Domestic fleece, p. lb.	25 @ 46	28 @ 40
Domestic, pulled, per lb	20 @ 37	27½@ 37½
TALLOW, per lb	8 @ 8½	8 @ 8½
OIL CAKE, per tun	29 00 @35 50	30 00 @38 00
PORK—New Mess, per bbl	@15 00	14 50 @
Prime, new, per bbl	10 00 @	9 75 @10 00
BEEF—Repacked mess	9 25 @11 25	9 75 @11 50
LARD, in bbls., per lb	8 @ 9¼	8 @ 9¼
BUTTER—Western, per lb	7 @ 11	8 @ 11
State, per lb	8 @ 14	8½@ 14
CHEESE	4 @ 7½	5 @ 7
EGGS—Fresh, per dozen	10 @ 12	12 @ 12½
POULTRY—Fowls, per lb	10 @ 11	9 @ 10
Chickens, per pair	31 @ 50	31 @ 50
Geese, per pair		1 25 @ 1 50
Ducks, per pair		38 @ 50
Turkeys, per lb	9 @ 10	9 @ 10
Wild Pigeons, per doz	88 @ 1 00	62 @ 75
Woodcock, per pair		50 @ 62
Partridges, per pair		50 @ 62
Dried Apples, per lb	4 @ 4½	4¼@ 5
Dried Peaches, per lb., peeled	10 @ 12	10 @ 12
Dried Cherries, pitted, per lb	10 @ 11	10 @ 11
Dried Raspberries, per lb	10 @ 11	11 @ 12
POTATOES—Mercers, p. bbl	1 75 @ 2 50	1 50 @ 2 00
June, new, ℔ bbl	1 50 @ 1 65	1 25 @ 1 37
Peachblows, per bbl		1 50 @ 1 75
Sweet Delaware, per bbl		3 00 @ 3 50
ONIONS—Red, per bbl	1 00 @ 1 25	1 00 @ 1 25
White, per bbl		1 25 @ 1 75
TURNIPS—Rutabaga, per bbl.	1 25 @ 1 75	75 @ 1 00
SQUASH—Marrow, per bbl	1 00 @	62 @ 1 00
WATERMELONS, per 100	20 00 @35 00	8 00 @12 00
NUTMEG MUSKMELONS, ℔ bbl.	2 00 @ 4 00	2 00 @ 2 25
TOMATOES, per bushel	31 @ 62	25 @ 37
APPLES—Common, per bbl	1 50 @ 2 00	1 50 @ 2 00
Apples—good, per bbl	3 00 @ 4 00	2 00 @ 3 00
PEARES, per basket	1 50 @ 2 50	75 @ 2 00
GRAPES—Isabella, per lb		6 @ 10

Exports of Breadstuffs from New-York, from the 1st of January to the 18th of September

	1860.	1861.
Wheat Flour, bbls	1,054,276	1,862,130
Rye Flour, bbls	6,249	8,624
Corn Meal, bbls	69,032	60,357
Wheat, bushels	5,258,544	15,316,257
Corn, bushels	2,074,114	7,986,653
Rye, bushels	100	398,763
Barley, bushels	8,280	1,000
Oats, bushels	101,224	145,282

Total Exports from United States for successive Years, ending Sept. 1st.

Year ending	Flour, Bbls.	Wheat, Bush.	Corn, Bush.
Sept. 1, 1861	2,703,790	29,005,866	11,806,179
Sept. 1, 1860	766,399	5,116,748	2,241,215
Sept. 1, 1859	157,845	496,855	367,532
Sept. 1, 1858	1,598,530	6,946,071	3,334,650
Sept. 1, 1857	1.332,944	10,355,054	5,289,868
Sept. 1, 1856	2,389,673	10,566,485	7,013,244
Sept. 1, 1855	182,972	329,399	7,047,566
Tot. for 7 years	9,132,153	62,816,478	37,100,254
Average per y'r	1,304,593	8,973,783	5,300,036
Amount past y'r	2,703,790	29,005,866	11,806,179

Reducing the Flour to Wheat, the total exports for seven years past were equivalent to 108,477,243 bushels of Wheat, or an average of 15,496,749 bushels a year. The Flour and Wheat exported for the year ending Sept. 1, 1861, were alone equivalent to **42,524,816** bushels of Wheat, and adding the Corn exported, the total export of Wheat and Corn (exclusive of Corn Meal) amounted to **54,330,995** bushels for the year past. The enormous exports during the month of September, if added, would raise the year's exports to still larger figures.

Exports of Breadstuffs to Great Britain and Ireland for one year, from Sept. 1, 1860 to Sept. 1, 1861.

From	Flour, Bbls.	Wheat, Bush.	Corn, Bush.	C. Meal, Bbls.
New-York	1,755,338	20,541,073	8,653,569	3,266
New-Orleans	179,427	66,767	1,464,267	996
Philadelphia	192,175	1,593,416	704,447	—
Baltimore	127,031	969,084	853,200	48
Boston	126,846	13,032	14,100	106
Other Ports	160,844	2,369,998	15,451	—
Totals, years ending				
Sept. 1, 1861	2,561,661	25,553,370	11,705,034	4,416
Sept. 1, 1860	717,156	4,938,714	2,221,857	944
Sept. 1, 1859	106,457	439,010	342,013	58
Sept. 1, 1858	1,295,430	6,555,643	3,317,802	143
Sept. 1, 1857	849,600	7,497,401	4,746,278	685
Sept. 1, 1856	1,641,265	7,956,406	6,731,161	6,816
Sept. 1, 1855	175,209	324,427	6,679,138	4,768
Sept. 1, 1854	1,846,920	6,038,003	6,049,371	41,726
Sept. 1, 1853	1,600,449	4,823,519	1,425,278	100
Sept. 1, 1852	1,427,142	2,728,442	1,487,398	1,680
Sept. 1, 1851	1,559,584	1,496,355	2,205,601	5,620
Sept. 1, 1850	574,751	461,276	4,753,358	6,411
Sept. 1, 1849	1,137,555	1,140,194	12,685,260	82,900
Sept. 1, 1848	182,583	241,309	4,390,226	108,534
Sept. 1, 1847	3,155,845	4,000,359	17,157,659	844,187
To. for 15 y's	18,831,914	74,176,428	85,897,434	1,108,988

To the Continent, from New-York and other Ports.

Year ending	Flour, Bbls.	Wheat, Bush.	Corn, Bush.	Rye, Bush.
Sept. 1, 1861	142,129	3,452,496	101,145	347,258
Sept. 1, 1860	49,243	178,031	19,358	—
Sept. 1, 1859	51,388	57,845	25,519	—
Sept. 1, 1858	303,100	390,428	16,848	13,100
Sept. 1, 1857	483,344	2,875,653	543,590	216,162
Sept. 1, 1856	748,408	2,610.099	282,083	1,975,178
Sept. 1, 1855	7,763	4,972	308,428	35,569
Tot. for 7 y'rs	1,785,607	9,569,504	1,296,971	2,587,267

From Canada to Great Britain and Ireland, via the St. Lawrence, Jan. 1st to Aug. 22d, 1861.

Flour, bbls	369,648	Corn, bushels	134,196
Oatmeal, bbls	17,929	Oats, bushels	289,273
Wheat, bushels	3,221,277	Peas, bushels	1,230,218

The tables above, (made up with great care from the most reliable sources of information,) give at a glance the extent of our exports of Breadstuffs for a series of years to Great Britain, Ireland and the Continent. The past season, it will be seen, is greatly in excess of any preceding one.

The following comparative table shows the quantity of some of the principal kinds of Breadstuffs left at tidewater, at Albany, from the commencement of navigation, to and including the 14th of September, in the years indicated;

	1859.	1860.	1861.
Canal opened,	April 15.	April 25	May 1.
Flour, bbls	233,606	466,310	686,552
Wheat, bush	979,700	7,050,897	14,673,402
Corn, bush	1,895,226	10,901,897	12,212,721
Barley, bush	176,696	95,612	200,624
Oats, bush	2,692,962	3,978,695	3,173,774
Rye, bush	104,072	149,275	409,397

Receipts of Breadstuffs at Chicago from Jan. 1 to Sept. 1.

	1861.	1860.	1859.
Flour, bbls	880,358	312,336	330,287
Wheat, bush	9,298,208	6,816,036	3,456,510
Corn, bush	18,890,127	13,391,623	3,887,758
Oats, bush	1,658,378	954,688	706,251
Rye, bush	286,815	152,662	90,998
Barley, bush	346,707	236,370	141,338

Receipts of Breadstuffs at Buffalo from the opening of Navigation to Aug. 31, in the years

	1859.	1860.	1861.
Flour, bbls	643,535	535,280	1,009,803
Wheat, bush	1,970,546	4,918,311	11,555,752
Corn, bush	2,103,834	8,679,421	10,486,445
Oats, bush	576,336	724,623	1,306,228
Barley, bush	59,438	9,668	106,425
Rye, bush	12,542	33,032	238,600
Tot. Grain, bush	4,722,696	14,366,055	23,693,445

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been supplied more largely since our September issue, the receipts averaging 4,466 per week. There was no scarcity at any of the markets, while the receipts for one week (Sept. 10) were over 5,800, which greatly depressed prices. At the last sale, Sept. 18th, there were 4,151 beeves offered, and prices ranged from 8¾c. to 9c. ℔ lb. estimated dressed weight, for prime cattle; 7c. to 8c. for common to good; and 5½c. to 6c. for poor, thin stock, of which there was a surplus. The average of all the sales was 7¾c.@7¾c., with no stock left over.

VEAL CALVES continue to diminish in numbers; but increase in size. Several lots of overgrown, grass-fed calves were bought by feeders to winter over. Good veal calves are worth 5c.@5½c ℔ lb., live weight, but more sell for 4½c. than at any other price. Receipts have averaged 518 per week, for the past month.

SHEEP AND LAMBS.—The demand is good, and trade quite active. Receipts have averaged 14,066 per week, which is 1,700 more than last month. Prices are rather lower, being equivalent to 3½c.@3¾c. ℔ lb., live weight

for good fat sheep, and 4c.@5¼c. for lambs. For the week ending Aug. 20, we had 17,361 sheep and lambs, completely overstocking the market and carrying prices very low. The late advance on wool, by increasing the value of pelts, enhances the value of sheep.

Live Hogs are coming in more freely, and the demand increases as cold weather approaches. For the past 5 weeks the average has been 5,681 per week, which is no more than are wanted to cut up and use fresh, in pork, lard, sausages, hams, and bacon. Prices are ½c@¾c. higher than last reported, or 4c.@4½c. ℔ lb. live weight for corn-fed, and 3¾c.@3½c. for still-fed hogs. Stock pretty well sold out each week.

The Weather, since our last report, has been favorable for maturing Fall crops. Occasional showers kept the ground in a good condition until the 11th inst., when a heavy storm wet down thoroughly, and raised the springs.——Our Daily Weather Notes, condensed, read: Aug. 21, clear, fine—22, cloudy, thunder-shower at night—23 to 27, very fine summer weather—28, cloudy, with rain to lay dust—29, cloudy—30, 31, clear, fine.——*Sept.* 1, 2, clear and cooler—3, cloudy, with heavy thunder shower at night (.63 inch rain)—4 to 8, clear and fine, with an autumn haze—9, light rain A. M., cloudy P. M.—10, cloudy, cool, heavy rain at night continuing during 11th, 2.07 inches water falling—12, fine, clear weather—17, 18, rainy days—19, clear, warm.

From the 15th of August to the 15th of September, 3.31 inches of rain fell in this vicinity.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

AUGUST.

1	72	8	66*r*	14	55	20	64	26	62
2	72	9	62*r*	15	58	21	58	27	62
3	72	10	68	16	58	22	67*r*	28	66*r*
4	72	11	69	17	62	23	62	29	69
5	74*r*	12	68*r*	18	63	24	60	30	66
6	72	13	59*r*	19	68	25	63	31	59
7	69			Average	65				

SEPTEMBER.

1	55	5	57	8	62	11	66	14	60
2	57	6	62	9	60	12	62	15	64
3	64*r*	7	65	10	57	13	60	16	66
4	67								

Exhibition Tables at the Office of the American Agriculturist.

During the past month, there has been a most attractive show on our tables, of fruit, flowers, and vegetables—one that would do credit to even a County Fair. Many thousands of visitors have crowded the Office, which has literally become what we designed it to be, the Agricultural Headquarters of the City. We cordially invite all who find it convenient, to inspect the different articles exhibited from time to time, and also to bring or send novelties they wish to show. Our exhibition is a perpetual one—open all the year—and being in the most central location of the city, hundreds, often thousands, drop in during a day. There are, therefore, few better places for exhibiting farm and garden products that are really worthy of being seen. The following are among the articles exhibited, which have not been previously noticed:

Vegetables, etc.—*Potatoes:* Large Dyckmans and Buckeyes, exhibited by Jacob McLane, Monmouth Co., N. J.....Good Peach Blows, by Michael Foley, Suffolk Co., N. Y.....Several varieties of new seedlings, by Wm. Bulkley, Berkshire Co., Mass.....*Tomatoes:* New Seedlings, I. Hicks, Queens Co., N. Y.....Fine specimens by J. A. S. Tuthill, Richmond Co., N. Y.....Lester's Perfected, by W. E. Caldwell, Queens Co., N. Y.....Upright tomato, also cross of Feejee and Italian, very fine, by W. F. Heins, N. Y.....Large handsome specimens from seed distributed at this Office, by Chas. H. Burton, Queens Co., N. Y.....A splendid cluster, weighing 5 lbs. 2 oz., by C. Gregg, Kings Co., N. Y.....Cuban, a small variety, highly flavored, by G. W. Usher, Richmond Co., N. Y.....Beautiful cluster, from our own seed, raised by the Proprietor.....One vine, Yellow tomatoes, extraordinary yield, by George Hite, Westchester Co., N. Y.....*Sundries:* German Cucumber, by Jno. Thompson, Richmond Co., N. Y.....Balsam Apple, ornamental, by J. W. Duryea, Kings Co., N. Y.....New Striped Egg Plant, and Scarlet Egg Plant, by W. F. Heins, N. Y. ..Hubbard Squash, a splendid specimen, by T. C. Leland, Suffolk Co., N. Y.....Kidney Beans and fine Cassabar Melons, by Geo. A. Elston, Chester Co., Pa.....Union Beet, curious growth, by E. H. Ensign, Essex Co., N. J.....A beautiful pyramid composed of Melons, of the Persian, Borneo, White Japan, Green Japan, Honolulu, and Allen's Improved varieties; interspersed with White and Scarlet Egg Plants, Fancy Gourds, Evergreen Leaves, by W. F. Heins, N. Y.

Fruit.—*Apples:* A fine collection embracing 40 newer named varieties, by W. S. Carpenter, N. Y.....Red John, Jersey Orange Pippin, and Maiden's Blush, good specimens, by Jacob McLane, Monmouth Co., N. J.....Ox apples, by P. L. Bogert, Queens Co., N. Y.....Late Strawberry apple, large specimens in good order, sent from St. Paul, Minnesota, by Martin D. Clark....*Pears:* 20 named sorts of newer varieties, by W. S. Carpenter, N. Y..... A fine specimen, unnamed, by P. L. Bogert, Queens Co., N. Y.....New Seedling, W. C. Bryant, N. Y.....Specimens of the Washington variety, by Thomas Herendeen, Madison Co., N. Y.....Flemish Beauty, fine specimens, by Benjamin F. Welch, Hudson Co., N. J.....Louise Bonne de Jersey, extra specimens, by J. Thompson, Richmond Co., N. Y.....Virgalieus, by L. Quick, Sullivan Co., N. Y.....Bartletts, splendid specimens, by R. Leavitt, Queens Co., N. Y.. *Grapes:* Concord and Porter, by Frederick Seiler, Essex Co., N. J. ..Concord and Hartford Prolific, A. S. Fuller, Kings Co., N. Y.....Fine Concord and Delaware, J. C. Kennison, Orange Co., N. Y....*Mulberries* from a tree that commenced bearing in June, by S. Tuttle, New-Haven Co., Conn.....Strawberry plants, runners struck in very small pots, one in each, convenient for transplanting, by C. S. Pell, N. Y. Orphan Asylum.

Flowers.—A splendid show of *Asters* of many varieties, transferred to pots, from seed distributed at this Office, grown by Franz M. Otto, in the Proprietor's grounds at Flushing, N. Y.; also, Zinnias, Marigolds, and other cut flowers by the same....Green Centered Helianthus, or Floral King, very fine, by S. H. Doughty, Hudson Co., N. J.....German & other Asters, by J. Wesley Jones, Columbia Co., N. Y.; also by E. F. Shonnard, Westchester Co., N. Y.....Also, a fine collection of Asters cut blooms, by Wm. P. Wright, Hudson Co., N. J.....Tigridia parvena, or Texas flower, by Jacob F. Braun, Kings Co., N. Y.....Passion Flower vine with six splendid blooms in the space of six inches, by A. P. Cummings, editor N. Y. Observer.

Grain.—Egyptian Millet, by E. Jolly, N. Y.....Chapman's Mammoth Fall Barley, a beautiful grain, from Chs. Chapman, Ottawa Co., C. W.....Rio Grande Wheat, excellent, from Martin D. Clark, Ramsey Co., Minn..... Corn, the stalks and leaves of deep purple color, used for dyeing, from the Proprietor's grounds.

Publishing the "Laws"—A Hint to Exchanges.

Among our nearly two thousand exchange papers, we notice that a large number publish, from week to week, the laws enacted by the legislatures of the several States where they are issued, while two or three in each State publish "by authority" the laws of the United States. The object of printing these laws is to have them read, but it is certain that very few persons can or do find time to go through with all the verbiage and technical language in which the laws are—perhaps necessarily—expressed. The suggestion we would make, is this, that it would be a great convenience to the reader, if the editor would, in the editorial columns, or elsewhere, give in each paper a brief synopsis, or at least an index of the laws published in that paper. Half a column, or even a paragraph or two would suffice to inform the reader of the nature or requirements of the several laws published from time to time. Though not a lawyer, we should be interested in such an outline or epitome of the legislative enactments of the different States; and the citizens particularly affected, would be still more interested. Such a course would not only render these legal columns more interesting, but would cause them to be more widely read, and the people would become better acquainted with the laws of the land.

Bone Mill Wanted—Queries.

There is still an unsupplied demand for a cheap, yet strong and effective mill for grinding raw bones finely—a mill that can be used with a common farm horse-power, and so cheap as to admit of its being generally purchased. There ought to be one in every town, at least, to turn to profitable account the large amount of bones that are now mainly wasted.—*Query.* Can any one tell us, what is about the average weight of the bones of an ox, weighing say 750 lbs. when dressed? The weight should include the bones of the head and feet. We have looked over a large number of books, but cann find no reference to the subject.

A Chinaman inquired for a "consistency" in a San Francisco jewelry store. Not being comprehended, he said it was some kind of a "jewel." He was informed by the shop keeper that it was not to be found in the city.

The Postage on the Agriculturist is positively only Six Cents a Year.

We hear that several Post Masters are charging 12, 18, 36, and even 72 cents a year on the *Agriculturist.* This is wrong. The law expressly says that a Periodical issued at stated periods, and not weighing over 3 ounces avoirdupois, shall be charged *one cent* per number, and only *half* this sum if paid quarterly in advance. The paper for the *Agriculturist* is purposely manufactured so that it shall weigh a small portion *less than three ounces.* We would add an occasional extra page for more advertising room, could we do so without increasing the postage to our subscribers. The Postmaster General has several times decided that postage on the *Agriculturist* is only six cents a year. See one of these decisions on page 96, volume XVII. There has been no change in the law or in the weight of the paper since. The paper must be weighed *dry* and *without the wrapper.* Subscribers will please inform us of any future over charge.

Money by Express.

N. B.—Hereafter, until further notice, sums of $5 and upward, whether in gold, silver, bills, or stamps, can be sent to us through any office of the *United States Express Company* (and this company *only*), at our expense.

The New Postage Stamps—Don't Send us the Old Ones.

It should be remembered that only a limited time is allowed to exchange the old for the new Postage Stamps, after which they become worthless. The time has already expired in this City. In sending subscriptions, please be careful to forward no old stamps; and we ask as a special favor, that *only three-cent* stamps be enclosed as remittances. It is very difficult to sell *ten-cent* stamps.

Our New Show Bills for 1862,

Are now ready. They contain a large number of engravings, and are got up in a style which makes them ornamental to any store, office, or hall. Canvassers will find them of great assissance in procuring subscribers. We will send one post-paid to any subscriber or other person who can use it to advantage.

Circulation of the Agriculturist.

Beyond all doubt or controversy, the circulation of the American Agriculturist to regular subscribers, is many thousands greater than that of any other Agricultural or Horticultural Journal in the World, no matter what its character, or time or place of issue. The publisher is ready at any and all times to substantiate this statement.

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Landowners, desirous of extending the cultivation of fruit, will please address R. N., 97 Cliff-st., New-York, stating particulars.

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Size No. 1, including 150 ft. of clothes line...$6 00
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Cost of socket, or neatly turned post..... 50

PATENT RETURN TABLE APPLE PARER.
Superior to any apple parer sold. Price 75 cts., or $7.50 per Dozen.

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WEATHER INDICATOR.

While in this age of invention and progress, our American Farmers have seized with avidity almost every invention and implement of husbandry that Art or Science could bring to their aid, one of the most important auxiliaries—the Barometer—has been almost entirely overlooked. This has arisen partly from a want of knowledge of its value and importance, but principally because the peculiar delicacy of construction, and high cost of the instrument have made it unavailable to the masses. In this instrument these objections have been entirely obviated. While its simplicity of construction, and scientific arrangement, render it perfectly portable and accurate, its cost is so low as to place it within the means of all. Indicating with unerring certainty coming changes in the weather, it also affords a simple and accurate medium for measuring hights, while the accompanying Thermometer gives the temperature. The Scientific American, Profs. Williams, Carr, Holmes, Douglass, and a host of public journals and scientific men, recommend it as the *Agricultural Barometer, par excellence.* Profs. Henry, Hackley, Maury, Drs. Arnot and Dick, have computed that an annual saving of five per cent. on all crops, might be made by its use, thus affording an annual saving of over fifty million dollars to the farmers of the United States. It is simple, durable, accurate, perfectly portable, and very cheap; is nicely finished, and affords a very beautiful and ornamental piece of furniture, some of the carved cases being very elegant. We give below a brief description of it, from the accompanying cut, in which the cistern is seen divided to show its construction. The cistern, *A*, is of cast iron—cast with two compartments—partly filled with mercury. The tube *C*, filled with mercury, is sealed into the cistern, *A*, and being placed upright, the air is admitted by turning back the screw, *D*, which has a flat place filed in its side near the outer end, where air can pass through the outer wall, when the mercury takes its level, and it is in working condition. To make it portable, turn it upon its side, when the spare mercury runs from *B* to *A*, filling tube and cistern, *A*, full—turn in the screw, and it is shut into *A* perfectly solid, and may be thrown about with impunity, or carried by Railroad or Stage Express all over the world in safety.

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With Wheel, $1 extra. With Skim or Front Plow, $1.50 extra.

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See *Agriculturist*, October, 1860.
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[Any of the following books can be obtained at the office of the *Agriculturist* at the prices named, or they will be forwarded by mail, *post paid*, on receipt of the price. Other books not named in the list will be procured and sent to subscribers when desired, if the price be forwarded. All of these books may well be procured by any one making up a library. Those we esteem specially valuable, are marked with a *.]

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Quinby's Mysteries of Bee keeping*	1 00
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Thomas' (John J.) Farm Implements *	1 00
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Todd's (S. E.) Young Farmer's Manual	1 25
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Youatt and Spooner on the Horse	1 25
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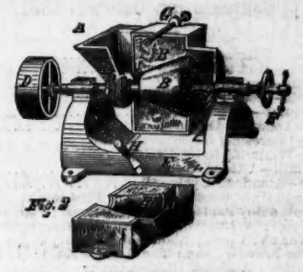
N. B. This being the last and only importation this season, the public can rely on getting a perfectly pure breed.



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Our Mills and Power have taken

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The American Institute, at their last Fair, awarded the premium of a LARGE SILVER MEDAL to this Mill.

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WILL LAST A LIFE TIME.

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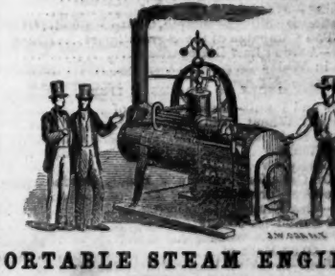

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2 Months Free.

As every person who reads a few numbers before January, will be quite likely to influence *others* to begin with the next volume, we make the following offer:

To all new subscribers for 1862, (*Vol.* 21,) *whose names are received during October, we will send the paper for the remaining* **two months** *of this year* **without charge**; *that is, we will send the paper* **14** *months for the regular price of one* year. ☞ *This offer extends to all* NEW *subscribers received this month, whether in premium clubs or otherwise, and also to very distant subscribers received after November* 1*st.*

☞ A few hundreds of the first names now received, will also get the present number, (October,) as we shall print a moderate extra edition.

About Next Year,

Large Premiums.

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Bounty to New Recruits.

The motto of the *Agriculturist* has always been, and still *is*: "*Published to do Good and Make Money.*"—Acting on this maxim, we have spared neither exertion nor expense, to make it a *good* paper, and to increase its circulation and good influence. That much good has been accomplished, our readers have abundantly testified. We might refer, also, to the thousands of homes that, during many years past, have been bettered, and beautified without and within, by its hints, suggestions, and plain, practical instructions. The amount of money we have made, is not worth talking about yet.——After so many years of strenuous effort, we had hoped to rest from EXTRA *publishing* labors for a year to come, but the times admonish us to the contrary. Our Southern subscribers are cut off for the present, and many of our Northern subscribers have exchanged the plow for the sword. To make up for all possible losses, and to reach a little higher circulation still, we are now ready to put forth any amount of further effort.——To those who will aid us by collecting clubs of subscribers, we shall not only be grateful, but we have provided to remunerate them for time and labor expended. See premiums on page 315.——To new "recruits", *now*, we offer a "bounty." See above.——To *all* subscribers, new and old, we shall not only offer a lot of good seeds (see page 261 last month), but shall also try to give them just the *best* paper that can possibly be made.

Our business is arranged to give a large dollar's worth to every reader, and yet to save a small profit on each annual subscription—an amount so small on each, that no one would wish to make it less; still on our great circulation, even this affords a nice little sum that we would like to "store away." But in these hard times we are willing to divide the profits among our readers. So, after appropriating what may be needed to remunerate voluntary agents, we intend to "invest" the balance in distributing good seeds to all who desire them, and in improving the character, beauty, and real value of the paper.

Will it Pay?

(*A Dialogue, "made to Order."*)

(*not*) MR. SMITH.—See here, neighbor, I want to advise you about making a small extra investment, in these hard times—say a dollar.

(*not*) MR. JONES.—What is it? Will it PAY?

1st Speaker.—Well, it has paid me for twenty years past, and it is likely to pay better now than ever before.

2nd Speaker.—I am in a hurry, but what is it?

1st Speaker.—You see the great piles of papers on those shelves—twenty large volumes of them. Here just look at a single volume. You see there are 384 great pages, more than twice as large as a common magazine; and if you will count up, you will find about a thousand articles or "pieces" each one of which gives some useful instruction about field work, or orchard work, or garden work, or house work, or about various farm animals, or something for the young people; and see how many fine engravings there are that show just how things *look*—why there are hundreds of them in this one volume.

2nd Speaker.—Must be much trash in so many things!

1st Speaker.—I have not found any. There may be some—it would be strange if there were not—but I find plenty of good things, enough to pay a hundred fold. Why, if I only valued one item in every ten, these would cost me only a cent apiece, and I have found many hints that have *each* paid me more than a dollar.

2nd Speaker.—What about the "extras" for next year?

1st Speaker.—Well, you see, in addition to what you find in this one volume, (the next one will be quite as good, I suppose,) the publisher is offering some extra inducements for these "war times." If you send on your name now for the next volume, which begins January 1st, you will get the paper for the rest of this year *free*. Then, the Editor is going to present to each subscriber a lot of good seeds, next Winter. He has done this every year, but on account of the reduction in the postage on seeds, and other reasons, he is going to send an extra lot this year.

2nd Speaker.—It must pay. Will you send my name?

1st Speaker.—Yes, with pleasure.——I forgot to tell you that the Publisher of the *Agriculturist* has offered $240 for information from practical experienced men, about cultivating Fall and Spring Wheat, Corn, Oats, Apples, Peaches, small fruits, feeding animals, fattening animals, and about the Kitchen Garden, and Flower Garden. From all these contributions of experienced men, the 12 best articles are to be selected, and $240 paid for them, and these are all to be published in the *Agriculturist*. So we shall each in reality get, for one dollar, all the information for which the publisher pays **$240!**

2nd Speaker.—Well, I'll try the paper, as you say you have had it for 20 years, and find it all right. I guess, from its looks, it will be good for wife and children too. But *how* is so much given for so little money?

1st Speaker.—It was all explained in the paper last Winter. You see, the *Agriculturist* has about twenty times as many subscribers, as most other papers have. So the publisher saves the expense of nineteen business offices, nineteen printing presses, nineteen sets of office men—editors, clerks, foremen, type setters, etc.—because one set answers just as well for a hundred thousand as for one thousand subscribers. So, you see, the publisher has more *profit* to expend in making a good paper, in getting fine engravings, and in raising and buying good seeds for distribution, and also for other premiums. This explains it all.——But you need not wait for me to send. Just write your name on a piece of paper, with Post Office, County, and State, and say "*Send Agriculturist for* 1862, *and the extra numbers.*" This is all the writing needed. Enclose it with a dollar, seal tight, and direct it plainly to: *Orange Judd, 41 Park Row, New-York City.*

American Agriculturist.

For the Farm, Garden, and Household.

A THOROUGH-GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS, for the LAWN or YARD; care of DOMESTIC ANIMALS, &c., &c., and to HOUSEHOLD LABORS. It has also an interesting and instructive department for CHILDREN and YOUTH.

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The teachings of the AGRICULTURIST *are confined to no State or Territory, but are adapted to the wants of all sections of the country—it is, as its name indicates, for the whole* AMERICAN CONTINENT.

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ORANGE JUDD, 41 Park-Row, New York City.

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